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Biodiversity Conservation in the Tropics

Gaps in habitat protection and funding priorities

WORLD CONSERVATION
MONITORING CENTRE

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Biodiversity Conservation in the Tropics:

Gaps in habitat protection and funding priorities

by the

World Conservation Monitoring Centre

M.G. Murray, M.J.B. Green, G.C.Bunting and J.R.Paine

WORLD CONSERVATION
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Contents

EXECUTIVE SUMMARY i

ACKNOWLEDGEMENTS ii

1. INTRODUCTION 1
   1.1 OBJECTIVES 1

1.2 HOW TO USE THIS DOCUMENT 1
   1.2.1 Guide to contents 1
   1.2.2 To look up the conservation status of an EFZ or forest type . . . 2
   1.2.3 To look up the conservation status of a country's EFZs or forest types 3
   1.2.4 To look up investments in a country's protected area network . . 3

2. METHODS 4
   2.1 BACKGROUND TO CLASSIFICATION SYSTEMS 4
   2.2 ECOFLORISTIC ZONES AND FOREST TYPES 5
   2.2.1 Data limitations 7
   2.3 INVESTMENTS IN PROTECTED AREAS 7

3. PROTECTION OF ECOFLORISTIC ZONES AND FOREST TYPES 9
   3.1 TROPICAL AFRICA 9
   3.1.1 Ecofloristic zones 9
   3.1.2 Moist forests 14
   3.2 SOUTH AND SOUTH-EAST ASIA 15
   3.2.1 Ecofloristic zones 15
   3.2.2 Moist forests 18
   3.3 INSULAR SOUTH-EAST ASIA 19
   3.3.1 Ecofloristic zones 19
   3.3.2 Moist forests 22
   3.4 TROPICAL SOUTH AMERICA 22
   3.4.1 Ecofloristic zones 22
   3.4.2 Moist forests 26
   3.5 CENTRAL AMERICA AND THE CARIBBEAN 27
   3.5.1 Ecofloristic zones 27
   3.5.2 Moist forests 28
   3.6 DISCUSSION 28
   3.6.1 Pantropical overview 29
   3.6.2 Regional comparisons 29

4. INVESTMENTS IN PROTECTED AREAS 31
   4.1 INDICATORS OF BIODIVERSITY 31
   4.2 NATIONAL INVESTMENTS 32
   4.3 ODA 34
   4.4 NATIONAL INVESTMENTS AND ODA 36

5. CONCLUSIONS AND RECOMMENDATIONS 38

REFERENCES 39

LIST OF FIGURES

1. Priorities for conservation action in tropical African countries 11
2. Priorities for conservation action in S. and S.E Asian countries 16
3. Priorities for conservation action in Insular S.E Asian countries 21
4. Priorities for conservation action in tropical S. American countries 25
5. Relationship between measures of biodiversity, EFZ and NBI 31
6. Priorities given to protecting national biodiversity 33
7. Effect of EFZ diversity on national investments in protected areas 34
8. Effect of EFZ and NBI on ODA for protected area projects 35
9. Government and donor assistance for protected areas 36
10. Effect on EFZ diversity on investments in protected areas 37

LIST OF TABLES

1. Key to major zones and ecofloristic zones for tropical regions 42
2. Key to forest types 48
3. Numbers of ecofloristic zones in tropical African countries 49
4. Conservation status of ecofloristic zones in tropical Africa 50
5. Distribution of ecofloristic zones in tropical African countries 51
6. Protection of moist forests in tropical Africa 52
7. Distribution of moist forests in tropical African countries 53
8. Numbers of ecofloristic zones in S. and S.E. Asian countries 54
9. Conservation status of ecofloristic zones in S. and S.E. Asian countries 55
10. Distribution of ecofloristic zones in S. and S.E. Asian countries 56
11. Protection of moist forests in S. and S.E. Asia 57
12. Distribution of moist forests in S. and S.E. Asian countries 58
13. Numbers of ecofloristic zones in Insular S.E. Asian countries 59
14. Conservation status of ecofloristic zones Insular S.E. Asian countries 60
15. Distribution of ecofloristic zones in Insular S.E. Asian countries 61
16. Protection of moist forests in Insular S.E. Asia 62
17. Distribution of moist forests in Insular S.E. Asian countries 63
18. Numbers of ecofloristic zones in tropical S. American countries 64
19. Conservation status of ecofloristic zones in tropical S. American countries . . . 65
20. Distribution of ecofloristic zones in tropical S. American countries 66
21. Protection of moist forests in tropical S. American countries 67
22. Distribution of moist forests in tropical S. American countries 68
23. Numbers of ecofloristic zones in C. America and Caribbean countries 69
24. Conservation status of ecofloristic zones in C. America and Caribbean countries 70
25. Distribution of ecofloristic zones in C. America and Caribbean countries 71
26. Protection of moist forests in C. America and Caribbean countries 72
27. Distribution of moist forests in C. America and Caribbean countries 73
28. Protection of major ecofloristic zones in tropical regions 74
29. Protection of moist forest types in tropical regions 75
30. Government and donor assistance for protected areas 76
31. ODA commitments for protected areas 77
32. Highest recipients of ODA for protected areas 77
33. Countries with high biodiversity and least ODA for protected areas 77

LIST OF ANNEXES

1. Ecofloristic zone protection in tropical countries of Africa 81
2. National protection of ecofloristic zones in tropical Africa 92
3. Moist forest protection in tropical countries of Africa 101
4. National protection of moist forests in tropical Africa 106
5. Ecofloristic zone protection in tropical countries of S. and S.E. Asia 111
6. National protection of ecofloristic zones in S. and S.E. Asia 117
7. Moist forest protection in tropical countries of S. and S.E. Asia 121
8. National protection of moist forests in S. and S.E. Asia 124
9. Ecofloristic zone protection in Insular S.E. Asia 127
10. National protection of ecofloristic zones in Insular S.E. Asia 129
11. Moist forest protection in tropical countries of Insular S.E. Asia 131
12. National protection of moist forests in Insular S.E. Asia 133
13. Ecofloristic zone protection in tropical countries of S. America 135
14. National protection of ecofloristic zones in S. America 141
15. Moist forest protection in tropical countries of S. America 145
16. National protection of moist forests in S. America 148
17. Ecofloristic zone protection in tropical countries of C. America and Caribbean 151
18. National protection of ecofloristic zones in C. America and Caribbean 154
19. Moist forest protection in tropical countries of C. America and Caribbean . 159
20. National protection of moist forests in C. America and Caribbean 163
21. ODA for biodiversity projects concerned with protected areas 167

LIST OF MAPS

1. Ecofloristic zones of tropical Africa
2. Moist forests of tropical Africa
3. Ecofloristic zones of tropical Asia
4. Moist forests of tropical Asia
5. Ecofloristic zones of tropical Latin America and Caribbean
6. Moist forests of tropical Latin America and Caribbean

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EXECUTIVE SUMMARY

This study makes use of several extensive GIS datasets, not previously available, to provide for the first time a comprehensive assessment of the conservation status of biodiversity throughout the tropics. Using the classification system of ecofloristic zones developed by the Centre National de la Recherche Scientifique (University of Toulouse, France) and that of closed moist forests developed by WCMC and IUCN - The World Conservation Union, the protected area coverage of tropical terrestrial habitats is examined and gaps identified in five regions: tropical Africa, South and South-East Asia, Insular South-East Asia, tropical South America, and Central America and the Caribbean.

Globally, 7.7% of tropical regions and 12.2% of moist tropical forests are conserved within protected areas. Protected area coverage of ecofloristic zones is shown to be uneven, with better protection of moist zones and forests compared with dry ones. It is suggested that future conservation actions should focus on improving the management of existing protected areas in moist zones, and on expanding protected area networks in drier zones. Regarding moist forest types, over 20% of sub-montane and montane forest types are protected but only 5% of inland swamp forest is protected. Some 12.4% of lowland rain forest occurs within protected areas.

The lowest regional level of representation in protected areas (3.6%) is in South and South-East Asia. Tropical South America has the highest level of protection (9.8%). Protection of the other regions is intermediate, some zones being poorly represented and others well represented in protected areas. Moist forests are least protected in Africa, where 7.6% of all moist forests are under protection and only 6.9% in the case of lowland rain forest. Tropical South America has the highest level of regional protection, with 15.1% of all moist forests and 14.4% of lowland rain forest within protected areas.

At the national level, countries with major proportions of particular ecofloristic zones and forest types within their jurisdiction are identified, and those providing low levels of protection are highlighted for priority conservation action. Thirteen countries contain entire ecofloristic zones within their territories and, therefore, are solely responsible for their protection. Countries with a low level of protection of ecofloristic zones and forest types are also identified. Seven ecofloristic zones receive no protection in any country.

A separate analysis of national and foreign investments in protected areas is presented for 25 tropical countries prioritised by the British Government for aid under its Renewable Natural Resources Strategies. Countries with a high diversity of ecofloristic zones tend to invest less in their protected areas. Foreign aid interventions do not adequately compensate for this disparity.

It is recommended that governments be guided by the findings in this report, particularly with respect to major gaps in the protection of tropical habitats. It is also recommended that the present study be supplemented by a quantitative assessment of the representation of centres of species diversity, speciation and endemism within tropical protected area networks.

In the longer term, it is suggested that a tripartite information system on (1) representation of tropical habitats and species hot spots within protected areas, (2) effectiveness of protected areas management, and (3) national and foreign investments in protected areas would enable cost effective strategies for conserving biodiversity in the tropics to be developed and monitored.

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The research reported here is the product of several major projects previously carried out by WCMC, notably the compilation of an atlas of the world's tropical forests in collaboration with IUCN - The World Conservation Union (funded principally by British Petroleum p.l.c.), an assessment of the conservation status of tropical managed areas as a contribution to the FAO Forest Resources Assessment 1990 (funded by the former Overseas Development Administration, UK), and a review of financial investments in biodiversity conservation (funded by the European Commission). It has also benefited from an ongoing review of the Indo-Malayan protected areas system, funded by the World Bank and executed by Dr John MacKinnon, Asian Bureau for Conservation in close association with WCMC. Massimiliano Lorenzini and George Muammar, FAO Forest Resources Assessment 1990 Project kindly prepared in digital format the ecofloristic zones classification system, first developed by F. Blasco and P. Legris and subsequently applied by M. K. Sharma, F. Lavenu and others to tropical regions.

The project was first conceived by Dr Mark Collins, Director of WCMC, whose support throughout its duration has been appreciated. The authors are very grateful to Victoria Freeman for her considerable secretarial assistance. Christine Carey-Noble and Mary Edwards also contributed to this study. Jeffrey McNeely and Dr Timothy Whitmore provided helpful comments in an earlier version (October 1995) of this report.

1. INTRODUCTION

1.1 OBJECTIVES

The aims of this study are twofold:

- to examine the adequacy of conservation area networks in tropical regions for protection of the full range of terrestrial ecosystems, and

- to quantify investments and identify shortfalls in national protected area networks, focusing on those countries prioritised by the British Government for development assistance under its Renewable Natural Resources Strategies.

The first objective is addressed in two complimentary ways by examining the extent to which (a) potential vegetation and (b) forest types are represented within protected areas. Potential vegetation is based on an ecofloristic zone (EFZ) classification system developed by the Centre National de la Recherche Scientifique (University of Toulouse, France). A classification developed by WCMC and IUCN - The World Conservation Union is used for closed moist forest types.

In examining protected area networks, the study identifies those EFZs and forest types with little or no protected areas coverage. It also distinguishes between countries with *de facto* sole responsibility for conservation of an EFZ, by virtue of their near exclusive territorial jurisdiction of that EFZ, and those with shared responsibility.

The second objective is addressed by assessing levels of national and foreign investment in protected areas in those tropical countries prioritised for aid by the British Government under its Renewable Natural Resources Strategies[1]. Information on investments in protected areas is related to that on richness of biodiversity, enabling gaps in financial support for biodiversity conservation to be identified.

1.2 HOW TO USE THIS DOCUMENT

1.2.1 Guide to contents

The methodology is described in Section 2, including background information on the EFZ and forest classification systems used in this study. The results of the analysis of the conservation status of EFZs and forest types are presented for each tropical region in Section 3. Investments in protected areas are assessed in Section 4. The report concludes with recommendations for future research required for policy development (Section 5).

Keys to the EFZ and forest classification systems are given in Tables 1 and 2, respectively. They should be used in conjunction with the maps which show the distribution of EFZs and forests in relation to protected areas.

[1] These strategies cover agriculture, biodiversity, forestry, aquatic resources and livestock/wildlife.

The raw data from the results of the analyses of the conservation status of EFZs and forest types are given for each region in the annexes. These data are presented in two ways:

- by EFZ or forest type, by country, and
- by country, by EFZ or forest type.

The first way enables the distribution and conservation status of a particular EFZ or forest type within its range countries to be readily looked up. The second provides a profile of the EFZs or forest types within a country and the extent to which they are protected.

The raw data are summarised in a series of complementary tables. In the case of the EFZ analysis, the data are also presented in a series of plots (Figures 1-4) which highlight priorities for conservation action, based on the extent of an EFZ within a country and the extent to which it is protected, as explained in Section 2.2.

Steps to quickly look up an EFZ or forest type, a country with respect to its EFZs or forest types, or the level of investments in a country's protected areas network are outlined below.

1.2.2 To look up the conservation status of an EFZ or forest type

1. Use the maps, in combination with the key in Table 3, to identify the relevant EFZ and its major zone.

   [e.g. Major Zone 2, EFZ 1 in tropical Africa: Guinea-Congolian lowland rain forest.]

2. Refer to Table 4, 9, 14, 19 or 24 to identify its approximate extent within protected areas, and those countries accounting for more than 25% of its total area.

   [i.e. 5-10% protected; Zaire is the only country with >25% of EFZ 1.]

3. If required, refer to Annex 1, 5, 9, 13 or 17 for full details of its distribution and extent of protection within range countries.

   [i.e. EFZ 1 is distributed among six countries. Zaire, for example, has 78.2% of the total extent, of which 5.9% lies within protected areas. Of the total extent, 4.6% is protected in Zaire.]

4. Refer to the relevant plot in Figures 1-4 to identify priorities for national conservation action. The results are discussed for the different regions in Sections 3.1.1, 3.2.1, 3.3.1, 3.4.1 and 3.5.1, respectively.

   [i.e. Figure 1b for Major Zone 2 shows that the highest priority for the conservation of EFZ 1 is in Zaire, plotted in bottom right quadrant, which is the only country having more than 10% of this ecofloristic zone and less than 10% of it protected.]

A similar procedure should be followed for a forest type, beginning with the relevant forest map and key in Table 2. Relevant tables are 6, 11, 16, 21 or 26, and annexes are 3, 7, 11, 15 and 19. Note that the results are not plotted, but they are discussed for each of the regions in Sections 3.1.2, 3.2.2, 3.3.2, 3.4.2 and 3.5.2.

1.2.3 To look up the conservation status of a country's EFZs or forest types

1. Use the maps, in combination with the key in Table 1, to identify the relevant EFZ.

   [e.g. Paraguay comprises EFZs 6 (evergreen forest), 11 (swamp grassland), 12 (semi-evergreen forest), 16 (dry semi-deciduous forest) and 19 (cerrados).]

2. Refer to Table 5, 10, 15, 20 or 25 to identify the importance of the country for each EFZ and the extent of its protection.

   [i.e. Over 50% of each of three EFZs is distributed within Paraguay, but none is exclusive to the country. Semi-evergreen forest (EFZ 12), for example, covers 19,383,934ha, of which 374,448ha are protected.]

3. If required, refer to Annex 2, 6, 10, 14 or 18 for full details about the distribution and extent of protection of EFZs within the country.

   [i.e. Of the five EFZs found in Paraguay, semi-evergreen forest (EFZ 12), for example, is the most extensive and 1.7% is protected.]

A similar procedure should be followed for a forest type, beginning with the relevant forest map and key in Table 2. Relevant tables are 7, 12, 17, 22 and 27, and annexes are 4, 8, 12, 16 and 20.

1.2.4 To look up investments in a country's protected area network

This part of the study is restricted to 25 countries prioritised by the British Government for aid under its Renewable Natural Resources Strategies. Data are not available for all of these countries.

1. Refer to Table 30 for expenditure by national protected area agencies expressed per unit area protected. These data are plotted in Figure 7.

   [e.g. Among the highest level of national investment is in Sri Lanka, with US$ 150 per sq.km protected.]

2. The impact of Official Development Assistance (ODA) on national investments in protected areas is shown in Figure 10, based on data in Table 30.

   [i.e. ODA accounts for an additional US$ 67 per sq.km protected in Sri Lanka.]

3. If required, refer to Annex 21 for a summary of the raw data for ODA projects concerned with protected areas.

   [i.e. There is one ODA project, funded by GEF, concerned with protected areas in Sri Lanka.]

2. METHODS

2.1 BACKGROUND TO CLASSIFICATION SYSTEMS

A variety of classification systems have been developed to comprehend better the global distributions of plants and animals (WCMC, 1992a). These systems, which attempt to classify the natural environment into discrete, discontinuous units, are inevitably imperfect since in reality nature takes the form of a highly variable continuum responsive both to spatial variations in climate, soils and topography, and to historical processes influencing species' distributions. These latter have left behind their own unique pattern in species richness and degree of endemism which frequently cuts across otherwise uniform habitats. Despite these difficulties, biogeographic classification of the natural environment has been attempted, not least because of the fundamental importance of providing a rational basis for the management and conservation of biodiversity.

The classification system of ecofloristic zones (EFZs) was developed by F. Blasco and P. Legris (CNRS, University of Toulouse, France) in order to standardise existing vegetation classifications of tropical Asia and the Pacific (Sharma, 1986; FAO, 1989). Subsequently, it was applied to the vegetation of Africa (Sharma, 1988) and South America (Lavenu, Bellan and Meste, 1988). The classification is based on four criteria:

- climate (mean annual precipitation, length of dry season, temperature and relative humidity);
- physiognomy and structure of vegetation using interpretation of satellite imagery;
- edaphic factors (soil and physical environment); and
- dominant or characteristic forest species of indigenous flora.

Thus, this system shares the principal features of other global habitat classification schemes in that it describes generalised habitat types in conjunction with a climatic or topographic descriptor (e.g. dry savanna steppe and thickets, or lowland rain forest <300m), and also recognises biogeographical boundaries in flora and fauna between regions which are otherwise similar in their climate and vegetation (e.g. transition forests of Madagascar, 800-1,800m; transition forests of southern Africa, 800-1,500m). However, it should be recognised that the analysis of protected areas coverage at this large scale inevitably disregards important localised variation in habitats. For example, the nature of the underlying substrate is not included in the criteria used to define EFZs, although different substrates often give rise to different assemblages of species within the same eco-climatic zone (IUCN, 1996).

The EFZ classification system is summarised for the different tropical regions in Table 3. Thirteen major zones are distinguished, each represented by one or more EFZs in the different regions. Whereas major zones are common to all regions (except the Mediterranean which occurs only in tropical Africa), EFZs are characteristic of particular regions.

A classification of moist forests was developed by WCMC and IUCN to integrate national datasets and produce a pantropical forest map. This is shown in Table 2. The system is

currently limited to closed moist forest, except in Latin America where closed dry forest and pine forest is also recognised. Open forest/woodland and savanna woodland have not been included. Datasets are mostly from the late 1980s but some are earlier than this (IUCN, 1991, 1992, 1996).

2.2 ECOFLORISTIC ZONES AND FOREST TYPES

The countries included in this study are those covered in the 1990 FAO Managed Areas Assessment (WCMC, 1992b) with the addition of South Africa (Tables 3, 8, 13, 18, 23). Digital data on EFZs, forest types and protected areas were processed at a regional level using geographical information system (GIS) technology. The regions chosen correspond with the EFZ coverages compiled by FAO. These are as follows:

- Tropical Africa
- South and South-East Asia
- Insular South-East Asia (including New Guinea)
- Tropical South America
- Central America and the Caribbean.

The EFZs were digitised by FAO, as part of its Forest Resources Assessment 1990 Project, and the data provided to WCMC for the purpose of this study. The Solomon Islands were included in the moist forest coverage, but not the EFZ coverage, of Insular South-East Asia. The other data layers were extracted from WCMC's Biodiversity Map Library, as follows:

- Biological Reporting Units,
- tropical forests, and
- protected areas.

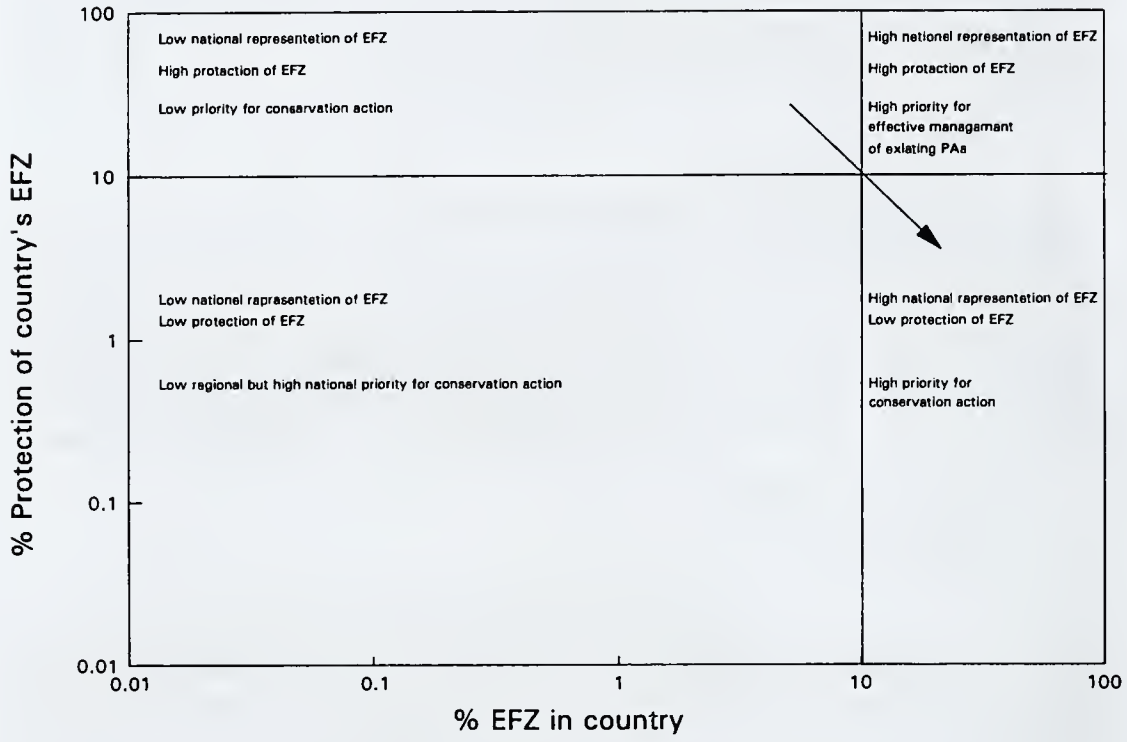
The WCMC Biodiversity Map Library is continuously expanding and being updated. For example, an ongoing review of the protected areas system in the Indomalayan realm contributed significantly to this study in terms of updating the protected areas coverage for this realm.

All classes of forest listed in the *Conservation Atlas of Tropical Forests* were included in the analysis (IUCN, 1991, 1992, 1996). IUCN Protected Area Management Categories I-VIII (old system[2]) were included; Categories I-III were then differentiated from the rest in order to distinguish between totally and partially protected areas. Protected areas not assigned to an IUCN Category were excluded from the analysis. Similarly, some Category VIII protected areas for which geographical coordinates are not yet available were excluded.

The GIS analysis was carried out using the overlay functions provided by ARC/INFO (Version 7). For each tropical region, data layers were combined to form one vector coverage, each polygon having a spatial area as well as a code for its forest type, EFZ, country and protection status. Once the vector coverage had been compiled, it was

[2] For descriptions of the old system of categories see *Categories, Objectives and Criteria for Protected Areas* , IUCN (1978). The new IUCN classification system of six categories has yet to be applied. For a full description of this new system see *Guidelines for Protected Area Management Categories*, IUCN (1994).

transformed from its original geographic coordinates system to a suitable equal area projection[3] to enable the sizes of polygons to be exported to a FoxPro database. This was used to generate the statistics of Annexes 1-20. Analysis of these statistics is presented in Tables 1-29 and Figures 1-4. Each figure shows the percentage of an EFZ within a country plotted against its protection within that country. Countries with no protection of an EFZ are included in the presentation of log-transformed data by adding 0.01 to the score of their protected area coverage. The figures are divided into four quadrants with the following conservation implications, as shown below:



The arrow indicates the direction of increasing priority for conservation action. Thus, for example, a data point labelled with the appropriate country ISO code in the bottom right of a plot, indicates that most of the EFZ lies within the territory of that country, where little of it is protected.

Throughout this report, adequate protection refers to EFZs or forest types for which at least 10% falls within protected areas (IUCN Categories I-VIII). This minimum of 10% is based on that agreed at the III World Congress on National Parks and Protected Areas to be an appropriate and practical target for each of the world's biogeographic provinces (McNeely and Miller, 1984). This target was applied to Biomes at the IV World Congress (IUCN, 1993).

[3] The projection chosen was Lambert Azimuthal with the radius of the sphere of influence set to the default value of 6,370km (the approximate radius of the Earth). The following central meridians were used: Africa 20° East, Central America 90° West, South America 60° West, South-East Asia 85° East, and Insular Asia 125° East. The latitude of the projection's origin was taken to be the Equator (0°) for each coverage.

2.2.1 Data limitations

Protected areas less than 1,000ha were excluded from the analysis, as this eliminates about 45% of sites at a loss of only some 0.2% of total area protected. Protected areas were held as polygons if boundary data were available or as point locations if only single coordinates were available. Both forms were included in the analysis. For point locations, circles were generated round each point proportional to the area of the site.

A few EFZs extend beyond the regions considered in this analysis. Statistics concerning protected area coverage refer to the areas within the countries indicated in Tables 3, 8, 13, 18 and 23.

2.3 INVESTMENTS IN PROTECTED AREAS

National investments in protected areas can be measured in several ways including the total area allocated for conservation, financial inputs, and staffing levels. The percentage of the total area of a country under protection is an indication of a nation's commitment to biodiversity conservation, but this may be relatively independent of its economic and human resources available to conserve biodiversity. Ultimately, it reveals little about the quality of management in protected areas. Financial investments in protected areas indicates the overall level of national expenditure on *in situ* conservation activities, but data are seldom readily available to differentiate between expenditure on actually managing protected areas and other operations. Thus, it cannot be used by itself to indicate the effectiveness of conservation efforts on the ground. In this respect, a comparison of staffing levels might provide a more direct indicator of what countries actually achieve in managing protected areas. However, staffing level by itself ignores the institutional context of a country, and its ability to deliver effective training programmes and to adequately support staff in the field (James *et al.*, in press). Thus, all three indicators of national investment were utilised in this study.

Data on national investments and on foreign aid for protected areas were compiled for 25 of the 26 countries prioritised for development assistance by the United Kingdom under its Renewable Natural Resources Strategies. China was omitted because it falls outside tropical Asia with respect to the EFZ classification developed by FAO (1989). These data are summarised in Annex 21.

Data on national investments in 1992 were obtained from a worldwide survey of 600 protected area management agencies that was part of an earlier study funded by the European Commission (James *et al.*, in press). Agency budgets overstate the investment in actually managing protected areas for the reasons discussed above. Where data were not obtained from all the agencies responsible for protected areas in a given country, the investments of those agencies which responded are taken as representative of that country's overall conservation effort. National investment data are expressed per unit area protected to provide a comparative measure of the intensity of conservation effort.

Data on foreign aid were also taken from the above-mentioned study funded by the European Commission (WCMC, 1995), part of which included a survey of Official Development Assistance (ODA) channelled through bilateral and multilateral aid agencies. The survey did not routinely include assistance from foreign NGOs, private foundations or the corporate sector, unless such data were available from the UNDP Development Corporation Reports which were systematically scanned for information on biodiversity conservation projects.

A number of criteria were applied in selecting investments for the present study:

- aid had to be specifically for projects devoted to biodiversity conservation;
- biodiversity conservation projects had to include a protected areas component; and
- the project had to be ongoing during 1992.

Thus, for the purposes of this study, foreign aid for biodiversity conservation is defined narrowly in terms of ODA directed towards protected areas in 1992. Projects which were aimed primarily at improving the management of natural resources for commercial utilisation rather than conserving biodiversity *per se* were excluded, as were projects which supported *ex situ* conservation. Projects concerned with buffer zone development on the periphery of protected areas were also excluded. For purposes of the analysis, both the total commitment of all projects active in 1992, and the proportion of the total commitment allocated for 1992, were used to assess a country's receipt of foreign aid. The former provides a fuller picture of the scale of support received by countries, the latter is more directly comparable with the data on national investments in 1992.

3. PROTECTION OF ECOFLORISTIC ZONES AND FOREST TYPES

3.1 TROPICAL AFRICA

The 41 countries of tropical Africa included in this analysis are listed in Table 3. The largest countries, Sudan and Zaire each cover about 10% of the region. They are some 100-200 times greater in size than the smallest countries, Burundi, Djibouti, Equatorial Guinea, Gambia, and Rwanda.

3.1.1 Ecofloristic zones

A key to the EFZs of tropical Africa is provided in Table 1. The *Code* refers to the classification found in Map 1 and Annexes 1 and 2. The *Class* indexes the habitat descriptions of Sharma (1988). The *Major Zone* indicates to which of 12 eco-climatic zones, common to all tropical regions, each EFZ belongs, with an additional zone (13) for temperate forests in South Africa (Table 1).

The extent of protection of each EFZ in tropical Africa is illustrated in Map 1 and detailed in Annex 1 which contains a breakdown of each EFZ by country. For example, EFZ Code 1 (Guinea-Congolian lowland rain forests) is found in six countries, but 78% is found in Zaire. Some 5.9% of the EFZ is protected overall, but only 4.7% in protected areas of Categories I-III. Some 4.6% of this EFZ is protected by protected areas (I-VIII) in Zaire.

Annex 2 provides an alternative breakdown of the protection of EFZs. In this case countries are listed alphabetically and classified by EFZ. For example, Angola has nine EFZs but two of them (13 Wetter Zambezian miombo woodlands and dry evergreen forests; 19 Drier Zambezian miombo, mopane woodlands, dry deciduous forests) make up over 60% of the area of the country. Overall 4.9% of Angola is protected, but only 0.6% of the country by protected areas in Categories I-III. EFZs 5, 18 and 56 have no protection in Angola. The majority (84.3%) of EFZ 18 (wooded grassland with *Adansonia digitata*) falls within Angola (Annex 1).

The EFZs of tropical Africa vary in size from a tiny fragment of lowland rain forest on the east coast of Madagascar (EFZ 2) to a large belt of dry evergreen rain forest in west and central Africa (EFZ 5), some 15,000 times greater in area (Map 1). Of the 53 EFZs in tropical Africa, only 14 have more than 10% of their area protected within conservation areas, 10 have less than 1% protected and two (EFZs 2 and 18) have no protection (Table 4).

The diversity of EFZs within countries is shown in Table 3: six countries have 10 or more EFZs within their territory. Countries with a high proportion of at least one EFZ within their territory are indicated in Table 5: 13 countries hold 50% or more of at least one EFZ within their boundaries; three of these countries (Kenya, Madagascar and South Africa) have sole responsibility for one or more EFZs, in that the entire zone falls within their territory. The special responsibilities of Madagascar and South Africa for the conservation of unique habitats is emphasised by the number of EFZs (9 and 10, respectively) that are found exclusively within their boundaries.

Within the framework of the EFZ approach, there are compelling arguments for national conservation action where a country has a high proportion of an EFZ and little of it is

currently protected by that country, as shown in Figure 1. Priorities for national conservation action are identified below.

Major Zone 1 (lowland wet) is composed of a single EFZ (4: swamp forests, mangrove and edaphic grasslands, see Table 1) which occupies two discontinuous coastal strips, one in west Africa and the other in Nigeria and Cameroon. This study indicates the need for greater protection of this EFZ in Liberia, Sierra Leone and Nigeria (Figure 1a).

Major Zone 2 (lowland very moist) consists of several areas of lowland rain forest in central Africa and along the northern and eastern coasts of Madagascar (described by EFZs 1, 2, 3 and 6). Some of these EFZs include centres of endemism and species diversity which may not be evident from the GIS analysis. Thus, the central African belt stretches from the western areas of high endemism and diversity in Cameroon and Equatorial Guinea, to eastern Zaire, which is a second focal centre of endemism and diversity. The moist forests of Madagascar are also exceptionally rich in endemic species. The urgent need for further protection of three of the four EFZs in Madagascar is highlighted in Figure 1b.

Major Zone 3 (lowland moist with short dry season) is a large discontinuous area of semi-evergreen forest in west and central Africa and along the eastern coast of Africa (described by EFZs 5, 7 and 8). These EFZs do not distinguish between the forest refugia of Upper Guinea and Cameroon or between the centres of endemism of the eastern coastal forests. This study indicates the need for better protection of EFZ 7 in Mozambique and Tanzania and further protection of EFZ 8 in South Africa (Figure 1c).

Major Zone 4 (lowland moist with long dry season) consists of deciduous woodlands and semi-evergreen forests (described by EFZs 9-13). This zone is distributed across Africa in a wide sub-Sahelian belt, a second broad belt to the south in Angola, Zambia, Mozambique, S.E. Zaire and Tanzania, and also in Madagascar. There are several centres of endemism in western Angola, Zambia, Mozambique, Tanzania and Madagascar which are not distinguished by the EFZs. Figure 1d highlights the need for protection of EFZ 9 in Guinea-Bissau, increased protection in Guinea, and for increased protection of EFZ 12 in Madagascar.

Major Zone 5 (lowland sub-dry) consists of deciduous woodlands and savannas with a wide distribution across the continent (described by EFZs 14-19, 22). It contains many important sites for large mammal populations, and several centres of endemism, including western Angola, southern Zambia, southern Mozambique, Natal and northern Tanzania, which are not distinguished by the EFZs. Figure 1e highlights the need for increased protection in many countries, but especially of EFZ 18 in Angola and EFZ 15 in Mozambique.

Major Zone 6 (lowland very dry/sub-arid) consists of dry savanna, shrub and bushland which includes a Sahelian band, a fragmented area of eastern Africa, a wide band in southern Africa, and a section along the southern coast of Madagascar. The zone is described by EFZs 20, 21, 23, and 32-35. It contains centres of endemism and diversity in western Angola and the Cape Province of South Africa, Tanzania, Ethiopia and Somalia that are not distinguished by the EFZs. Figure 1f highlights the need for increased protection in many countries, including EFZ 34 in Madagascar, EFZ 21 and 33 in Somalia, and EFZ 32 in Niger and Sudan.

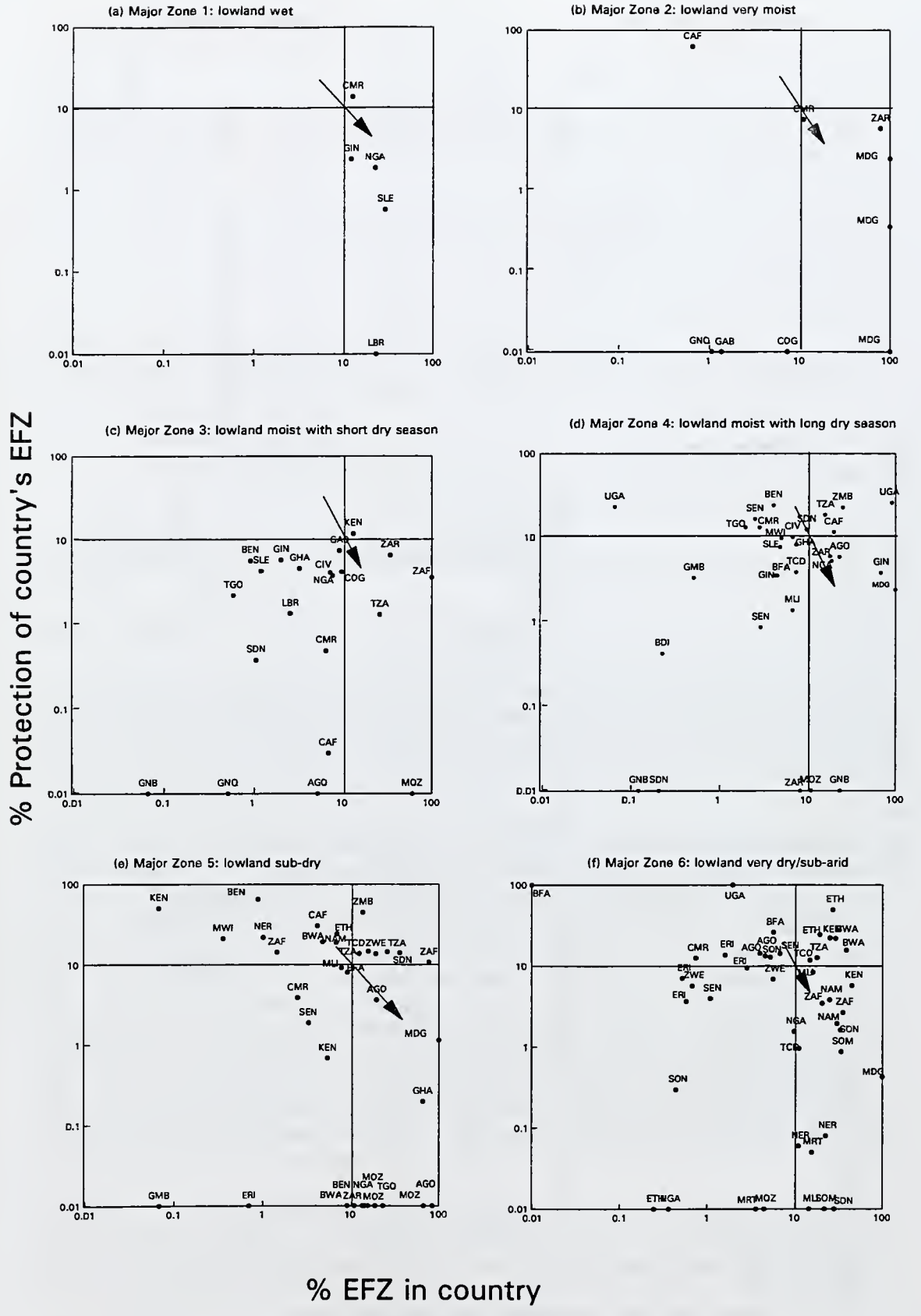


Figure 1 The need for action in tropical African countries to conserve EFZs, prioritised according to the extent of their distribution and protection within each country. EFZs are grouped into their major zones (1a-m). The direction of the arrow indicates increasing priority for national conservation action.

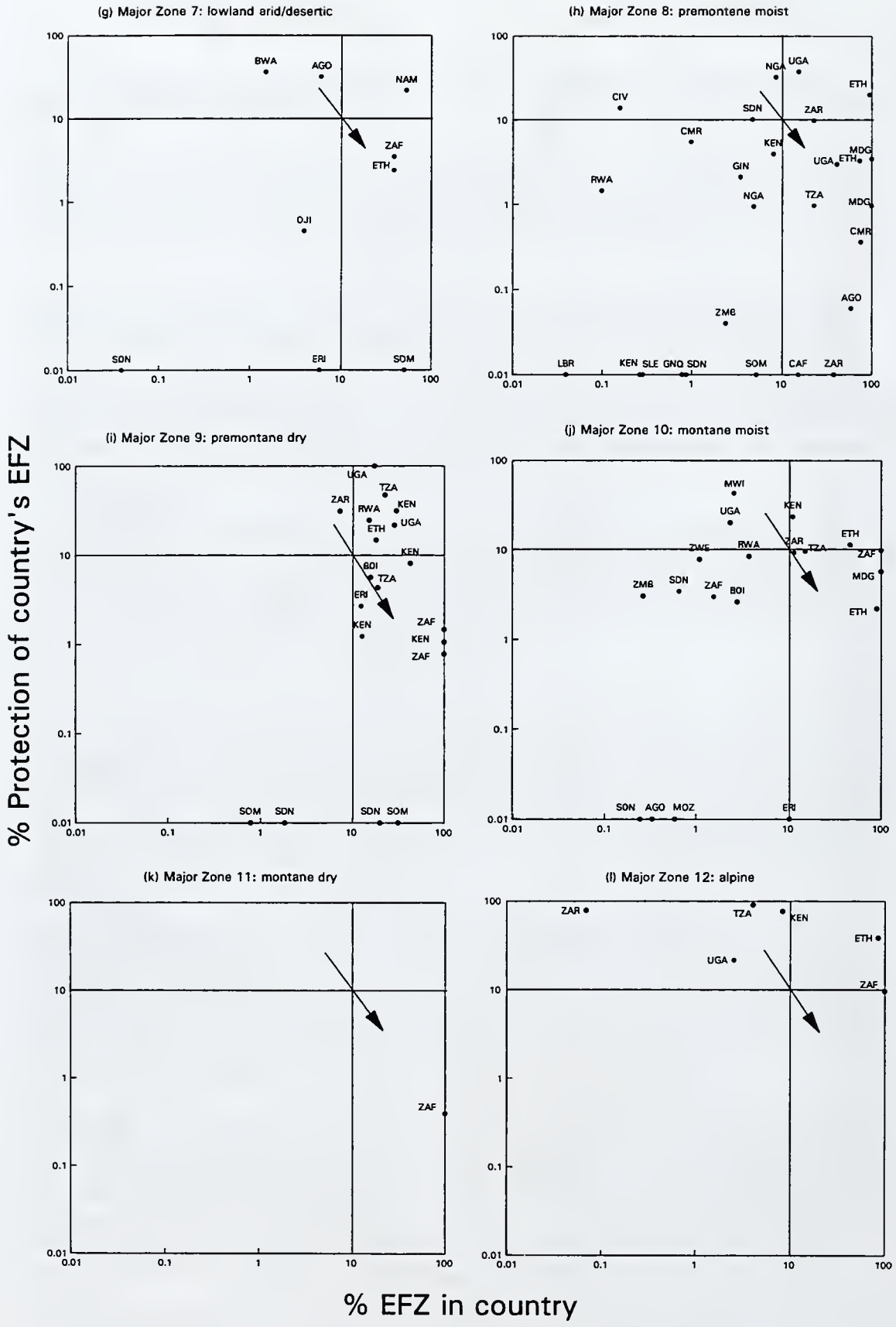


Figure 1 (continued)

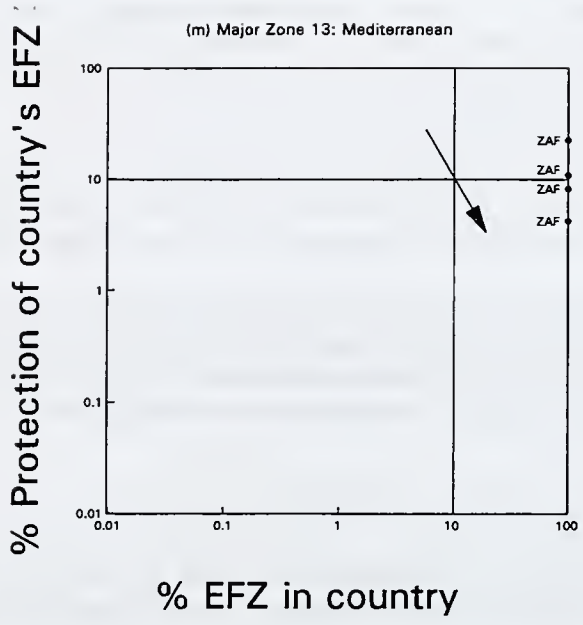


Figure 1 (continued)

Major Zone 7 (lowland arid/desertic) consists of shrub pseudo-steppe and steppe in the regions of the Namib, Afar, Ogaden and Sahara deserts. The zone is described by EFZs 36-38. It contains centres of endemism along the western margins of Angola, Namibia and South Africa, and in Somalia which are not distinguished by the EFZs. Figure 1g indicates the urgent need for protection of EFZ 37 in Somalia.

Major Zone 8 (premontane moist) consists of transition forests and woodlands between 1,000m-3,000m with a discontinuous and widespread distribution in Guinea, Cameroon, eastern and south-central Africa and Madagascar. The zone is described by EFZs 39-45. It includes or partially includes several centres of endemism in Cameroon, eastern Zaire, Ethiopia and Tanzania. Figure 1h highlights the need for protection of EFZ 39 in Tanzania, EFZ 40 in Cameroon, EFZ 42 in Angola and Zaire, and EFZ 45 in Madagascar.

Major Zone 9 (premontane dry) consists of grassland, shrubland and evergreen forests from 1,500m to 3,000m, with a fragmented distribution in eastern Africa and in South Africa. The zone is described by EFZs 49-54. It passes through a number of centres of endemism in eastern Africa and one endemic bird area in South Africa. Figure 1i highlights the need for protection of EFZ 54 in Somalia and Sudan, and increased protection of EFZs 49 and 50 in South Africa, and EFZ 53 in Kenya.

Major Zone 10 (montane moist) consists of montane evergreen bushland, thicket and forest from 1,500m to 3,000m with a fragmented distribution in eastern Africa, South Africa and Madagascar. The zone is described by EFZs 56-58 and 61. It is associated with a number of areas of high endemism and species richness in eastern Africa. Figure 1j shows that the zone is moderately well protected, but highlights the need for increased protection of EFZ 61 in Ethiopia.

Major Zone 11 (montane dry) consists of montane evergreen scrubs from 1,500m to 2,900m in South Africa (described by EFZ 62). It includes part of the Drakensberg Alpine Region, a centre of plant diversity and part of an endemic bird area. Figure 1k indicates that this zone is inadequately protected.

Major Zone 12 (alpine) consists of alpine scrub above 2,900m in small fragmented localities in eastern Africa and South Africa. It is described by EFZs 64 and 65. It includes parts of several centres of endemism. Figure 1l indicates that this zone is adequately protected.

Major Zone 13 (Mediterranean and temperate) consists of fynbos and temperate forests in South Africa (described by EFZs 25, 27, 29 and 30). It includes the Cape regional centre of endemism with two centres of plant diversity and endemism: the Western Cape Domain and the Cape Floristic Region. Figure 1m emphasises the sole responsibility of South Africa to conserve this zone.

3.1.2 Moist forests

A key to the moist forest types of the tropical regions of the world, including Africa, is provided in Table 2. The code refers to the classification found in Map 2 and Annexes 3 and 4.

Annex 3 provides information on the protection of moist forests in tropical Africa, with a breakdown of countries for each type of forest. For example, mangrove (Forest Code 111) is found in 16 countries of tropical Africa, but 48% of it occurs in just two countries, Nigeria and Gabon. Only 2.0% of mangrove is protected overall and only one tenth of this is in protected areas of Categories I-III. Some 5.8% of mangrove in Gabon is protected (Categories I-VIII) but only 0.2% in the case of Nigeria.

Annex 4 provides information on the protection of moist forests within each African country. For example, Cameroon has four types of forest, one of which (lowland rain forest) comprises 31.6% of the country. Some 65.9% of the country is not forested. Inland swamp forest (Forest Code 113) has no protection in Cameroon, but only a minority of this forest type is found in Cameroon (Annex 3).

When considered broadly, it can be seen from Table 6 that montane rain forest is well represented in protected areas in Africa, but that mangrove, inland swamp forests and lowland rain forests require greater protection.

Countries with a high proportion of the various moist forest types within their territories are indicated in Table 7. Zaire contains more than 50% of three types of forest: inland swamp, lowland rain forest and montane rain forest, the former two categories being poorly represented in protected areas. Congo, Ethiopia and Nigeria have extensive inland swamp forest, montane rain forest and mangrove, respectively. Inland swamp forest is not protected in Congo and very little of Nigeria's mangrove is protected; montane rain forest is well represented in protected areas of Ethiopia. The majority of other countries contain only small proportions of these forest types.

3.2 SOUTH AND SOUTH-EAST ASIA

The 12 countries of South and South-East Asia included in this analysis are listed in Table 8. India is much the largest country covering almost 50% of the region's land area. It is almost four times larger than Pakistan, the next largest country, and over 60 times larger than Bhutan, the smallest country of the region.

3.2.1 Ecofloristic zones

A key to the EFZs of South and South-East Asia is provided in Table 1. The *Code* refers to the classification found in Map 3 and Annexes 5 and 6. The *Class* indexes the habitat descriptions of Sharma (1986). The *Major Zone* indicates which of 12 eco-climatic zones common to all tropical regions are associated with the EFZs of this region.

The extent of protection of each EFZ in South and South-East Asia is illustrated in Map 3 and detailed in Annex 5 which contains a breakdown of each EFZ by country. An alternative arrangement of the data is found in Annex 6, which lists countries alphabetically and provides a breakdown of the EFZs in each country. Examples which assist in the interpretation of these annexes are given in Section 3.1.1.

The EFZs of South and South-East Asia vary in size from a small patch of hill forest in Sri Lanka (EFZ 36) to a large area of dry deciduous forest in India (EFZ 18) which is some 5,100 times greater in area (Map 3). Of the 39 EFZs in the region, only five have more than 10% of their area protected by conservation areas, 11 have less than 1% of their area protected, including four with no protection at all (Table 9).

The diversity of EFZs within countries is shown in Table 8. India is much the most diverse country with 26 EFZs represented. Countries with a high proportion of at least one EFZ within their territory are indicated in Table 10. Seven countries in the region (Cambodia, India, West Malaysia, Myanmar, Pakistan, Sri Lanka and Vietnam) each contain entire EFZs within their territories and, therefore, are solely responsible for their protection. India contains over 50% of 15 EFZs, and four of these are found nowhere else, emphasising the regional importance of this country for habitat conservation.

Within the framework of the EFZ approach, there are compelling arguments for national conservation action where a country has a high proportion of an EFZ and little of it is currently protected by that country, as shown in Figure 2. Priorities for national conservation action are identified below.

Major Zone 2 (lowland very moist) consists of lowland evergreen rain forest in the Western Ghats of India, in Sri Lanka, in a belt extending from the Himalayas to Malaysia, and in parts of Indo-China. It is described by six EFZs (3-6, 14 and 15). The major zone includes numerous centres of diversity and endemism. This study indicates the need for increased protection of EFZ 14 in Vietnam, EFZs 4 and 5 in Myanmar and EFZs 5 and 15 in India (Figure 2a).

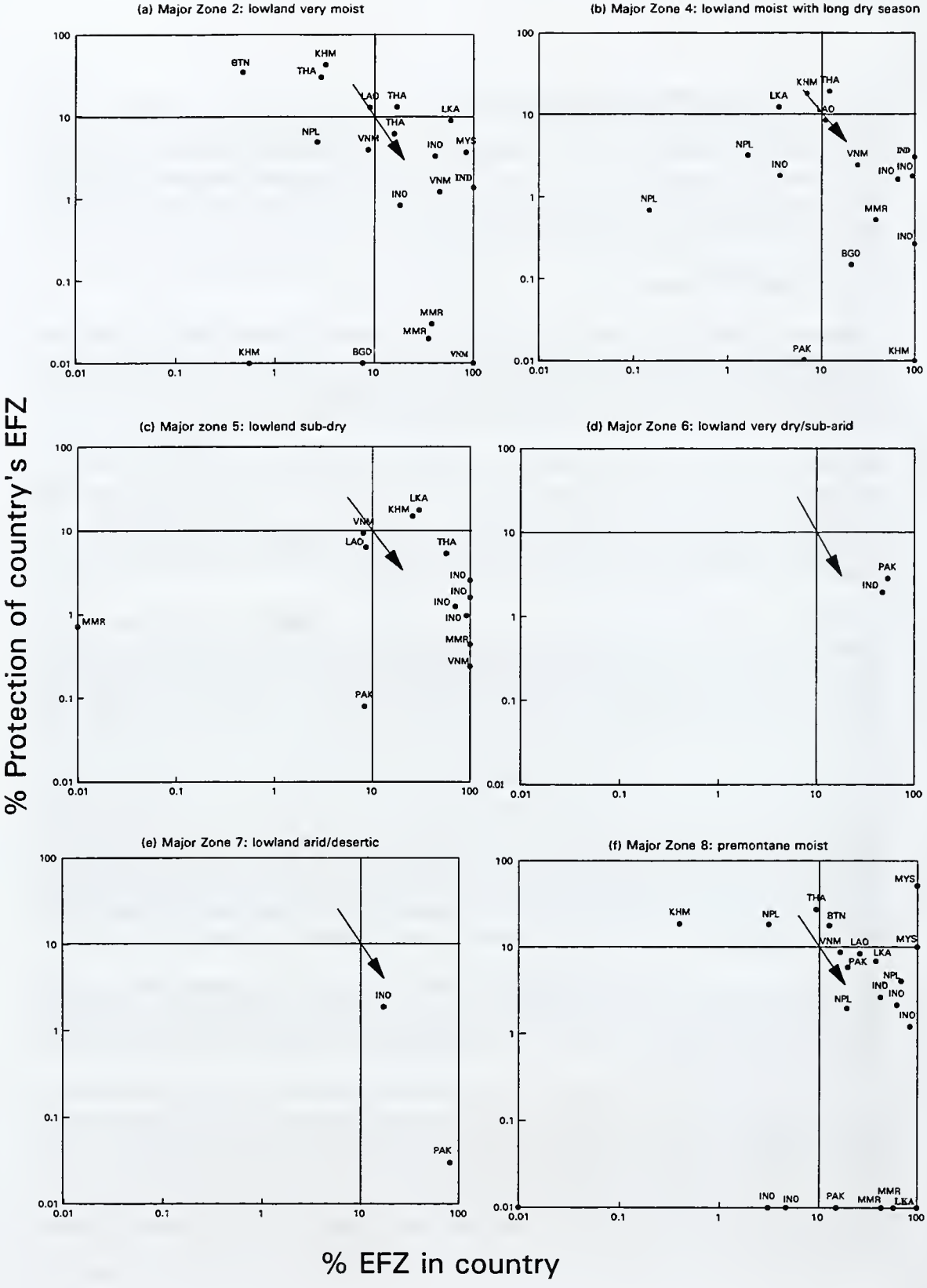


Figure 2 The need for action in South & South-East Asian countries to conserve EFZs, prioritised according to the extent of their distribution and protection within each country. EFZs are grouped into their major zones (2a-j). The direction of the arrow indicates increasing priority for national conservation action.

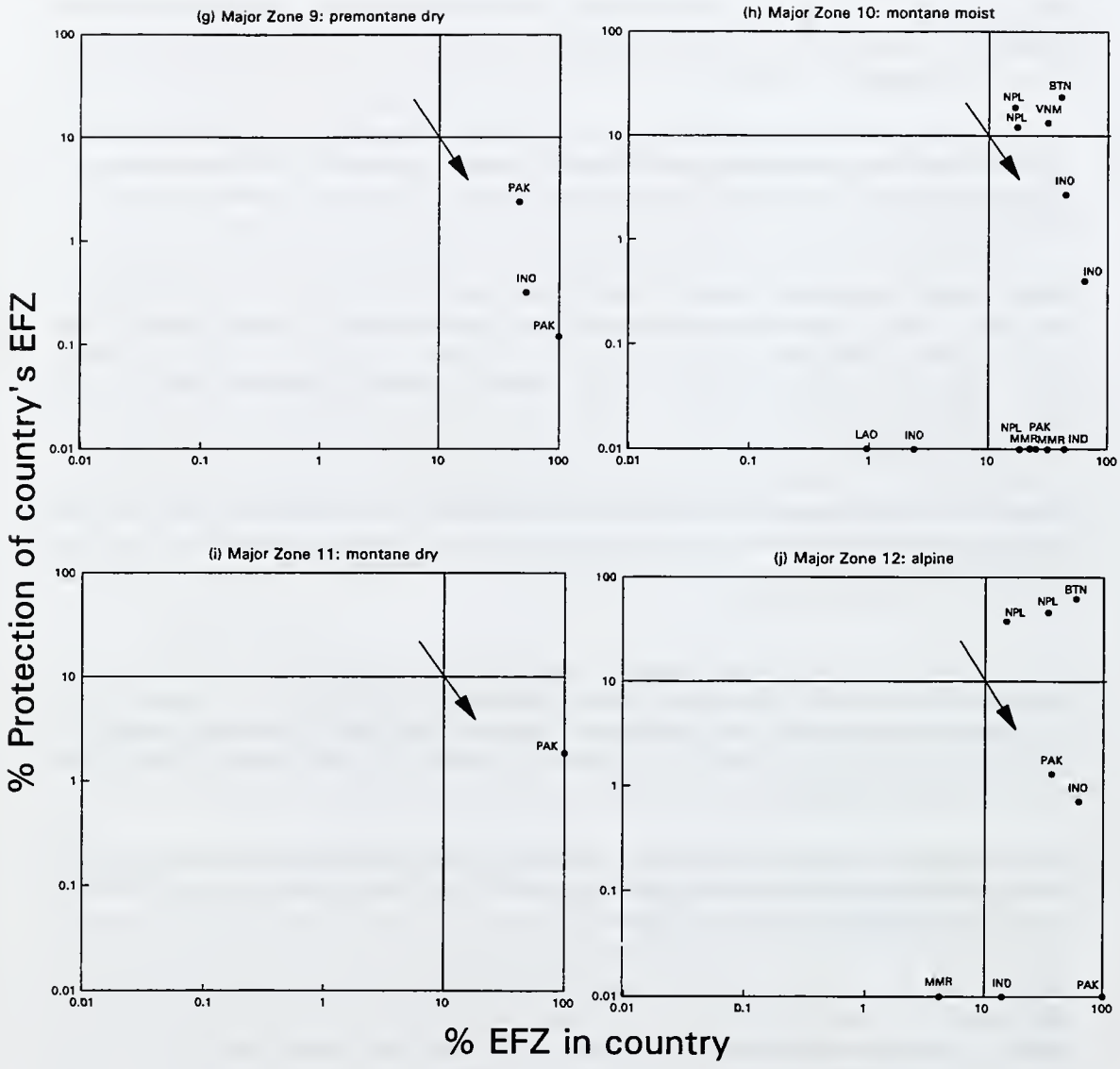


Figure 2 (continued)

Major Zone 4 (lowland moist with long dry season) consists of moist deciduous forests which form a transition between rain forests and drier areas across the region, and is also found in the foothills of the Himalayas. It is described by EFZs 24-29. The need for increased protection of EFZ 29 in Cambodia, EFZ 28 in Bangladesh, EFZ 26 in India and EFZ 24 in Myanmar is illustrated in Figure 2b.

Major Zone 5 (lowland sub-dry) consists of a large area of dry deciduous forest covering much of India, and large areas of Cambodia, Lao PDR, Myanmar, Pakistan, Sri Lanka, Thailand and Vietnam. It is described by EFZs 7-9 and 16-19. The need for increased protection of EFZ 7 in Vietnam, EFZ 17 in Myanmar and EFZs 8, 9, 18 and 19 in India is demonstrated in Figure 2c.

Major Zone 6 (lowland very dry/sub-arid) consists of thorn forest and pseudo-steppe in north-west India and Pakistan. It is described by a single EFZ (22) in this region. The need for increased protection of this EFZ in both India and Pakistan is illustrated in Figure 2d.

Major Zone 7 (lowland arid/desertic) consists of pseudo-steppe vegetation in Pakistan and north-west India. It is described by a single EFZ (30) in this region. The zone includes part of the Indus valley. The need for increased protection of EFZ 30 in Pakistan is shown in Figure 2e.

Major Zone 8 (premontane moist) consists of hill and montane forests in the foothills and mountains of the Himalayas, extending south into Myanmar, Lao PDR and Thailand, and scattered across other high country. The zone is described by EFZs 32-39. It incorporates many centres of endemism and diversity. The need for increased protection of EFZ 36 in Sri Lanka, EFZs 34 and 35 in Myanmar, EFZs 37 and 38 in India and EFZ 38 in Pakistan is shown in Figure 2f.

Major Zone 9 (premontane dry) consists of dry evergreen forest and pseudo-steppe in hill country and in the foothills of the Himalayas in Pakistan and northern India. It is described by EFZs 20 and 21. The need for increased protection of EFZ 21 in Pakistan and EFZ 20 in India is illustrated in Figure 2g.

Major Zone 10 (montane moist) consists of moist montane temperate forests stretching from the Western to Eastern Himalayas. It is described by EFZs 10-13. The major zone incorporates several centres of endemism and diversity. The need for increased protection of EFZs 10 and 11 in Myanmar, EFZs 10 and 12 in India, EFZ 12 in Nepal and EFZ 13 in Pakistan is shown in Figure 2h.

Major Zone 11 (montane dry) consists of Himalayan dry temperate forests, principally in north-west Pakistan. It is described by a single EFZ (23). The need for increased protection of EFZ 23 in Pakistan is shown in Figure 2i.

Major Zone 12 (alpine) consists of alpine steppe and scrub in the western and eastern Himalayas. It is described by EFZs 31, 40 and 41. The need for increased protection of EFZs 31 and 41 in Pakistan and EFZs 40 and 41 in India is shown in Figure 2j.

3.2.2 Moist forests

A key to the moist forest types of the tropical regions of the world, including South and South-East Asia, is provided in Table 2. The code refers to the classification found in Map 4 and Annexes 7 and 8.

Annex 7 provides information on the protection of moist forests in South and South-East Asia, with a breakdown of countries for each type of forest. An alternative arrangement of the data is found in Annex 8, which lists countries alphabetically and provides a breakdown of moist forests in each country. Examples which assist in the interpretation of these annexes are given in Section 3.1.2.

The majority of moist forest in South and South-East Asia consists of lowland rain forest (Forest Code 122) and lowland monsoon forest (Forest Code 220), which occur in all countries included in the analysis with the exception of Pakistan. Also a negligible amount

of lowland rain forest occurs in Bhutan (Annex 7). It can be seen from Table 11 that inland swamp, lowland rain forest and montane monsoon forest are well represented in protected areas in South and South-East Asia, but that mangrove, montane rain forest and lowland monsoon forest are less adequately protected.

Countries with a high proportion of moist forest types within their territories are indicated in Table 12. Myanmar contains over 50% of montane rain forest but none of it is protected; it also contains large areas of lowland rain forest with virtually none protected. Large areas of mangrove are found in Bangladesh and Thailand with little protection. India has large areas of lowland and monsoon rain forest with relatively small amounts protected. West Malaysia has large areas of inland swamp forest with little protection.

3.3 INSULAR SOUTH-EAST ASIA

The six countries of Insular South-East Asia included in this analysis are listed in Table 13. The Solomon Islands are omitted from the section on EFZs. Indonesia is by far the largest country incorporating almost two thirds of the region's land area. It is over four times larger than Papua New Guinea, the next largest country, and over 300 times larger than Brunei, the smallest country in the region.

3.3.1 Ecofloristic zones

A key to the EFZs of Insular South-East Asia is provided in Table 1. The *Code* refers to the classification found in Map 3 and Annexes 9 and 10. The *Class* indexes the habitat descriptions of FAO (1989). The *Major Zone* indicates which of 12 eco-climatic zones common to all tropical regions are associated with the EFZs of this region.

The extent of protection of each EFZ in Insular South-East Asia is illustrated in Map 3 and detailed in Annex 9 which contains a breakdown of each EFZ by country. An alternative arrangement of the data is found in Annex 10, which lists countries alphabetically and provides a breakdown of the EFZs in each country. Examples which assist in the interpretation of Annexes are given in Section 3.1.1.

The EFZs of Insular South-East Asia vary in size from a small patch of evergreen forest on Sumba (EFZ 6) to a large area of lowland evergreen forest west of Wallace's line (EFZ 1), which is some 475 times greater in area (Map 3). Of the 17 EFZs in the region, eight have greater than 10% of their area protected by conservation areas and only one (EFZ 12) has less than 1% under protection (Table 14).

The diversity of EFZs within countries is shown in Table 13. Indonesia is much the most diverse country with all 17 EFZs represented. Countries with a high proportion of at least one EFZ within their territory are indicated in Table 15: Indonesia, Papua New Guinea and the Philippines each include 50% or more of some EFZs. Five EFZs are found exclusively within Indonesia, emphasising the regional importance of this country for conservation of unique habitats.

Within the framework of the EFZ approach, there are compelling arguments for national conservation action where a country has a high proportion of an EFZ and little of it is currently protected by that country, as shown in Figure 3. Priorities for national conservation action are identified below.

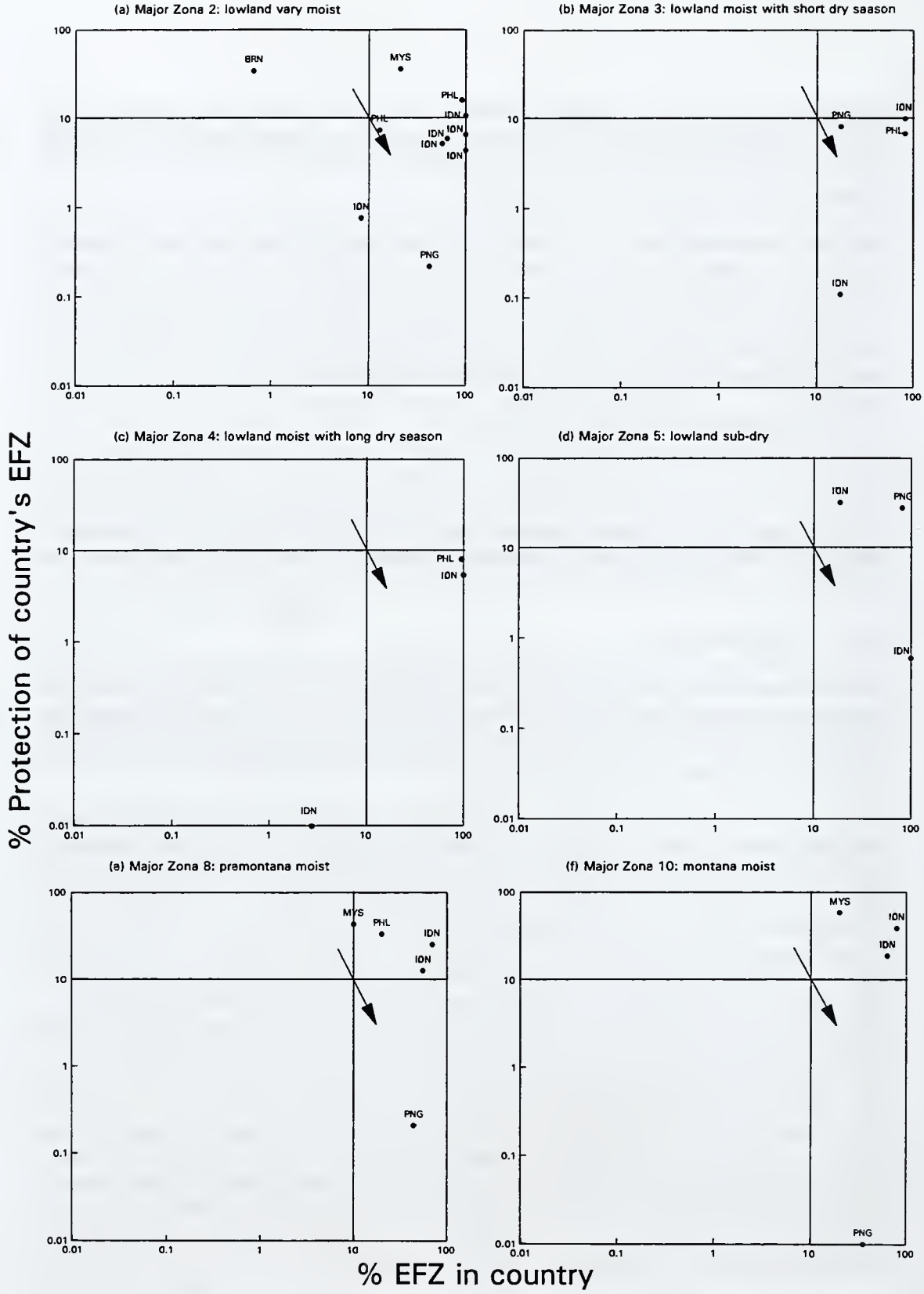


Figure 3 The need for action in Insular South-East Asian countries to conserve EFZs, prioritised according to the extent of their distribution and protection within each country. EFZs are grouped into their major zones (3a-g). The direction of the arrow indicates increasing priority for national conservation action.

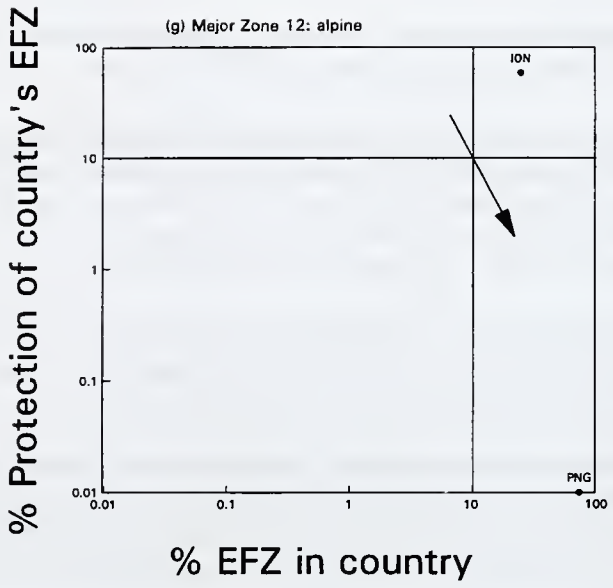


Figure 3 (continued)

Major Zone 2 (lowland very moist) consists of large areas of lowland rain forest which cover the greater part of this region (Map 3) and which are described by EFZs 1-6. The area contains numerous centres of endemism and diversity which are not distinguished by the GIS analysis of EFZs. The need to improve protection of EFZ 4 in Papua New Guinea is shown in Figure 3a.

Major Zone 3 (lowland moist with short dry season) consists of moist semi-deciduous forests which are scattered across the region. It is described by EFZs 7 and 8. These EFZs include centres of endemism and species richness in the Philippines, Sulawesi, Java, Flores, Sumba, Timor, Tanimbar and southern New Guinea. The need for increased protection of EFZ 7 in Indonesia is shown in Figure 3b.

Major Zone 4 (lowland moist with long dry season) consists of dry deciduous forest in parts of Philippines, Java, Flores, Sumba and Timor. It is described by EFZs 9 and 10. As with the previous zone, the EFZs incorporate several centres of endemism and species richness. The need for increased protection of EFZ 10 in Indonesia is shown in Figure 3c.

Major Zone 5 (lowland sub-dry) consists of dry deciduous forests and thickets in southern New Guinea and the Lesser Sunda islands. It is described by EFZs 11 and 12, both containing important centres of endemism and diversity. The need for increased protection of EFZ 12 in Indonesia is shown in Figure 3d.

Major Zone 8 (premontane moist) consists of montane evergreen forests scattered across the region. It is described by EFZs 13 and 14, indicating the biogeographical divide of Wallace's line. The zone contains several centres of endemism and diversity. The need for increased protection of EFZ 14 in Papua New Guinea is shown in Figure 3e.

Major Zone 10 (montane moist) consists of montane forest and thickets in Malaysia, Indonesia and Papua New Guinea. It is described by EFZs 15 and 16, indicating the

biogeographical divide of Wallace's line. The need for increased protection of EFZ 16 in Papua new Guinea is shown in Figure 3f.

Major Zone 12 (alpine) consists of alpine grasslands and low scrub in the highlands of New Guinea. It is described by a single EFZ (17). The need for protection of EFZ 17 in Papua New Guinea is shown in Figure 3g.

3.3.2 Moist forests

A key to the moist forest types of the tropical regions of the world, including Insular South-East Asia, is provided in Table 2. The code refers to the classification found in Map 4 and Annexes 11 and 12.

Annex 11 provides information on the protection of moist forests in Insular South-East Asia, with a breakdown of countries for each type of forest. An alternative arrangement of the data is found in Annex 12 which lists countries alphabetically and provides a breakdown of moist forests in each country. Examples which assist in the interpretation of these annexes are given in Section 3.1.2.

The majority of moist forest in Insular South-East Asia consists of lowland rain forest (Forest Code 122) which occurs in all countries included in the analysis (Annex 11). It can be seen from Table 16 that mangrove, montane rain forest and montane monsoon forest are well represented in protected areas in Insular South-East Asia, but that inland swamp, lowland rain forest and lowland monsoon forest are less adequately protected.

Countries with a high proportion of moist forest types within their territories are indicated in Table 17. Indonesia contains over 50% of five types of forest: mangrove, inland swamp, lowland rain forest, lowland monsoon forest and montane rain forest, three of these being less than adequately protected (above). The Philippines has over 50% of montane monsoon forest, over half of which is protected. Papua New Guinea has large areas of montane rain forest which are poorly protected.

3.4 TROPICAL SOUTH AMERICA

The 10 countries of South America included in this analysis are listed in Table 18. Brazil is by far the largest country. Covering almost 60% of the region, it is over six times larger than Peru, the next largest country, and over 90 times larger than French Guiana, the smallest country in the region.

3.4.1 Ecofloristic zones

A key to the EFZs of tropical South America is provided in Table 1. The *Code* refers to the classification found in Map 5 and Annexes 13 and 14. The *Class* indexes the habitat descriptions of Lavenu, Bellan and Meste (1988). The *Major Zone* indicates within which of 12 eco-climatic zones common to all tropical regions each EFZ lies.

The extent of protection of each EFZ in tropical South America is illustrated in Map 5 and detailed in Annex 13 which contains a breakdown of each EFZ by country. An alternative arrangement of the data is found in Annex 14 which lists countries alphabetically and

provides a breakdown of the EFZs in each country. Examples which assist in the interpretation of these annexes are given in Section 3.1.1.

The EFZs of tropical South America vary in size from a small patch of evergreen forest in Columbia and Venezuela (EFZ 3) to a large belt of moist forest extending across the Amazon basin and foothills of the Andes (EFZ 2), some 180 times greater in area (Map 5). Of the 31 EFZS in tropical South America, 13 have more than 10% of their area protected by conservation areas, five have less than 1% of their area protected and one (EFZ 8) has no protection (Table 19).

The diversity of EFZs within countries is shown in Table 18. Six of the 10 countries in this region have 13 or more EFZs within their territory. Countries with a high proportion of at least one EFZ within their territory are indicated in Table 20: seven of the 10 countries incorporate 50% or more of at least one EFZ within their boundaries; two (Brazil and Peru) of these have sole responsibility for one or more EFZ, in that the entire zone falls within their jurisdiction. Five EFZs are found exclusively within Brazil, emphasising the regional importance of this country for conservation of unique habitats.

Within the framework of the EFZ approach, there are compelling arguments for national conservation action where a country has a high proportion of an EFZ and little of it is currently protected by that country, as shown in Figure 4. Priorities for national conservation action are identified below.

Major Zone 1 (lowland wet) is composed of a single EFZ (Forêt ombrophile, 0 mois secs), which occurs in the upper Amazon basin and a coastal strip of Columbia and Ecuador. Several centres of diversity and endemism are found within this EFZ, both east and west of the Andes. This study indicates that this EFZ is adequately protected (Figure 4a).

Major Zone 2 (lowland very moist) consists of large areas of lowland rain forest in the Amazon basin and the foothills of the Andes. It is described by a single EFZ (2) which includes several centres of diversity and endemism in Amazonia and the Guayana Highlands. This zone is adequately protected (Figure 4b).

Major Zone 3 (lowland moist with short dry season) is a large discontinuous area of evergreen forest (described by EFZs 3, 4, 5 and 6). It forms a transition between Amazonian forest and cerrados in the south and east, and also occurs south of the Orinoco and on the Atlantic and Pacific coasts. This study suggests that there is a need for more protection of EFZs 5 and 6 in Brazil.

Major Zone 4 (lowland moist with long dry season) consists of deciduous forest, tree savanna and prairie occurring in a southern belt across central Brazil and northern Bolivia, and in Paraguay, and in a northern belt across Columbia, Venezuela, Guyana and Surinam. It comprises EFZs 8-12. The need for protection of EFZ 7 in Peru, EFZ 9 in Colombia, EFZs 11 and 12 in Brazil, and EFZ 12 in Paraguay is shown in Figure 4d.

Major Zone 5 (lowland sub-dry) consists of deciduous and dry forest widely spread across the region and described by EFZs 13-16. It includes the Caatinga of northeastern Brazil, the Gran Chaco in Bolivia and Paraguay, and the Guajiran lowlands of Columbia and Venezuela - all sites of high diversity and endemism. The need for increased protection of EFZ 13 in Ecuador and Bolivia, EFZ 14 in Brazil and EFZ 16 in Bolivia is shown in Figure 4e.

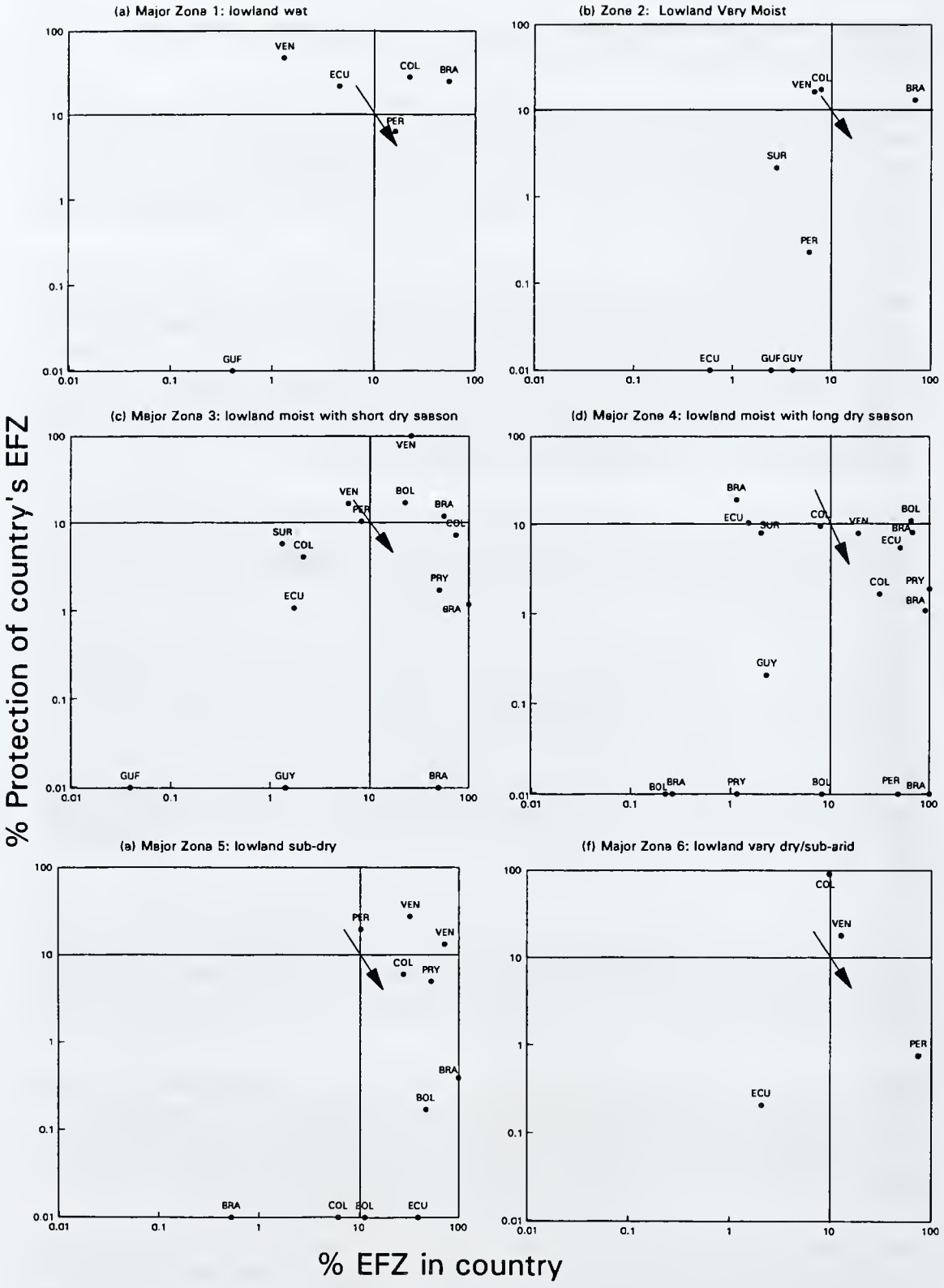


Figure 4 The need for action in tropical South American countries to conserve EFZs, prioritised according to the extent of their distribution and protection within each country. EFZs are grouped into their major zones (4a-l). The direction of the arrow indicates increasing priority for national conservation action.

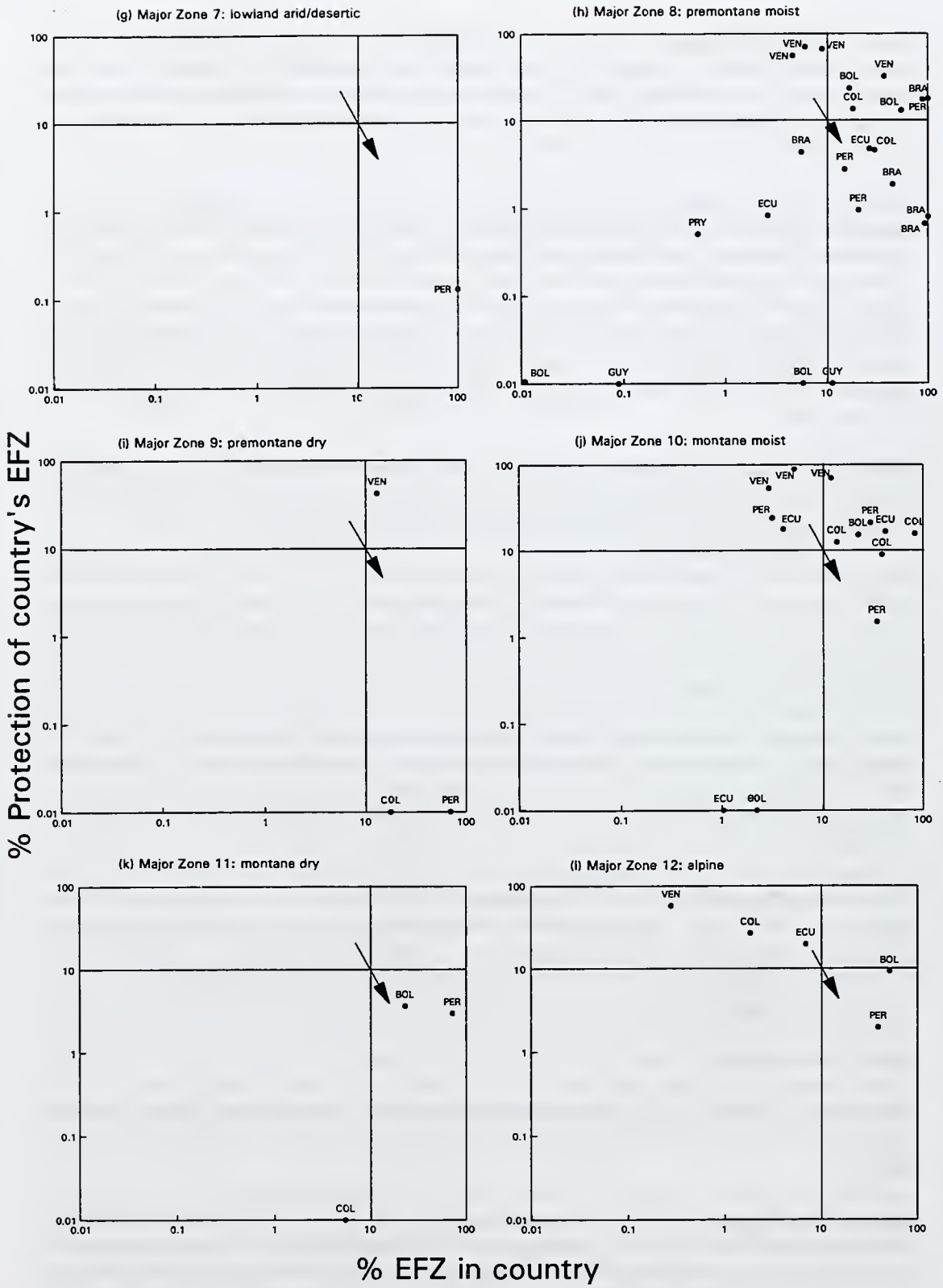


Figure 4 (continued)

Major Zone 6 (lowland very dry/sub-arid) consists of dry forest and scrub stretching in a narrow coastal or near coastal band from Ecuador in the north to Chili, and also occurring in Venezuela. It is described by EFZ 17. It includes the centres of diversity associated with the Lomas Formations of Peru and the coastal Cordillera of Venezuela. The need for increased protection of this EFZ in Peru is shown in Figure 4f.

Major Zone 7 (lowland arid/desertic) consists of prairie in an arid coastal strip of Peru described by EFZ 18. It includes the centre of diversity associated with the Lomas Formations. The need for increased protection of this zone in Peru is shown in Figure 4g.

Major Zone 8 (premontane moist) consists of sub-montane forests in southern Brazil, fringing the Andes, and on the highlands of southern Venezuela, western Guyana and northern Brazil. The zone is described by EFZs 19, 20, and 29-33. The need for further protection of EFZs 19, 20 and 31 in Brazil, EFZ 29 in Peru and EFZ 30 in Guyana is shown in Figure 4h.

Major Zone 9 (premontane dry) consists of deciduous, sub-montane forests fringing the Andes in Venezuela, Colombia and Peru. It is described by a single EFZ (34). The need for increased protection in both Peru and Colombia is shown in Figure 4i.

Major Zone 10 (montane moist) consists of montane moist forest situated along the Andes, from Venezuela in the north to Bolivia. It is described by EFZs 35-37. The area includes centres of species richness and endemism in the central and eastern Andes. This major zone is relatively well represented in protected areas, but there needs to be further protection of EFZ 37 in Peru (Figure 4j).

Major Zone 11 (montane dry) consists of montane dry forest situated along the western, central and eastern Andes in Colombia, Bolivia and Peru. It is described by a single EFZ (38). As with the previous zone, the area is associated with several centres of diversity and endemism. The need for improved protection of this zone in Bolivia and Peru is shown in Figure 4k.

Major Zone 12 (alpine) consists of alpine scrub and herbaceous communities covering a large area of the central Andes in Ecuador, Peru and Bolivia and smaller fragmented areas of Colombia and Venezuela. It is described by a single EFZ (39) and is associated with centres of endemism and diversity in Peru and Ecuador. The need for further protection in Peru is shown in Figure 4l.

3.4.2 Moist forests

A key to the moist forest types of the tropical regions of the world, including South America, is provided in Table 2. The code refers to the classification found in Map 6 and Annexes 15 and 16.

Annex 15 provides information on the protection of moist forests in tropical South America with a breakdown of countries for each type of forest. An alternative arrangement of the data is found in Annex 16 which lists countries alphabetically and provides a breakdown of moist forests in each country. Examples which assist in the interpretation of these annexes are given in Section 3.1.2.

The majority of moist forest in tropical South America consists of lowland rain forest which occurs in all countries included in the analysis (Annex 15). It can be seen from Table 21 that mangrove, lowland, sub-montane and montane forests are well represented in protected areas in South America, but that inland swamp, dry, and especially pine forests are less adequately protected.

Countries with a high proportion of moist forest types within their territories are indicated in Table 22. Brazil contains over 50% of four types of forest: mangrove, lowland rain forest, dry forest and pine forest, two of these being less than adequately protected in the region (above). Peru has large areas of inland swamp forest, sub-montane and montane rain forests, one of these being less than adequately protected (above). Bolivia and Venezuela have large areas of montane and sub-montane rain forests, respectively, both of which are well represented in protected areas.

3.5 CENTRAL AMERICA AND THE CARIBBEAN

The 30 countries of Central America and the Caribbean included in this analysis are listed in Table 23. Mexico is much the largest country, covering almost 50% of the region's land area. It is over 10 times larger than Nicaragua, the next largest country, and over 10,000 times larger than the smallest Caribbean island states of Montserrat and the British Virgin Islands.

3.5.1 Ecofloristic zones

EFZs of Central America and the Caribbean were not available at the time of this study. However, a map of Major Zones has been prepared by FAO from a combination of 77 Holdridge Life Zones (FAO pers. comm.). The Major Zones indicate the geographical boundaries of 12 eco-climatic zones which are common to all tropical regions (Table 1).

The extent of protection of each Major Zone in Central America and the Caribbean is illustrated in Map 5 and detailed in Annex 17, which contains a breakdown of each zone by country. An alternative arrangement of the data is found in Annex 18, which lists countries alphabetically and provides a breakdown of the zones in each country. Examples which assist in the interpretation of these annexes are given in Section 3.1.1.

The Major Zones of Central America and the Caribbean vary in size from the relatively small patches of moist terrain in Mexico, Guatemala and Costa Rica (Major Zone 10) to a large area, classified as *premontane dry*, covering much of Central America and parts of the larger islands of the West Indies (Major Zone 9). This latter zone is some 90 times larger than the former (Map 5, Table 24). Of the 10 Major Zones represented in the region, three have more than 10% of their area protected by conservation areas and three have less than 1% under protection (Table 24).

The diversity of Major Zones within countries is shown in Table 23. Mexico is much the most diverse country with nine of the 10 Major Zones represented. Countries with a high proportion of at least one Major Zone within their territory are indicated in Table 25. Only seven countries in the region contain over 10% of a Major Zone within their territory, and only three countries (Mexico, Nicaragua and Panama) contain over 25% of a Major Zone. Mexico contains over 50% of six Major Zones, and one of these (Major Zone 11) is found

nowhere else, emphasising the regional importance of this country for conservation of unique habitats.

Although the analysis of conservation at the level of Major Zones is at a very large scale, it does suggest the need for increased protection of the *Premontane Dry* (Major Zone 9), *Montane Dry* (Major Zone 11), *Lowland Sub-Dry* (Major Zone 5) and the *Lowland Very Dry/Sub-Arid* (Major Zone 6) in Mexico and, to a lesser degree, the *Lowland Moist with Long Dry Season* (Major Zone 4) in Cuba and Mexico.

3.5.2 Moist forests

A key to the moist forest types of the tropical regions of the world, including Central America and the Caribbean, is provided in Table 2. The code refers to the classification found in Map 6 and Annexes 19 and 20.

Annex 19 provides information on the protection of moist forests in Central America and the Caribbean, with a breakdown of countries for each type of forest. An alternative arrangement of the data is found in Annex 20 which lists countries alphabetically and provides a breakdown of moist forests in each country. Examples which assist in the interpretation of these annexes are given in Section 3.1.2.

The majority of moist forest in Central America and the Caribbean consists of lowland rain forest in countries of Central America and Cuba, and dry forest and pine forest in Central America, particularly Mexico, Honduras and Nicaragua (Annex 19). It can be seen from Table 26 that most moist forest types are well represented in protected areas in the region. However, pine forest is less adequately protected, particularly in Mexico and Guatemala, and dry forest is poorly protected, especially in Mexico which contains over 98% of this forest type.

Countries with a high proportion of moist forest types within their territories are indicated in Table 27. Cuba contains over 50% of mangrove and protects a little over 5%; Guatemala contains over 25% of inland swamp forest, of which almost 30% is protected, and over 25% of montane rain forest, of which only 2% is protected; Honduras also has over 25% of montane rain forest with 4% protected; Jamaica includes over 25% of sub-montane rain forest, of which 19% is protected; Martinique protects a high proportion of its lowland and montane rain forest; Mexico contains over 25% of lowland rain forest, of which 8% protected, over 98% of dry forest, of which only 0.3% is protected, and over 85% of pine forest, of which less than 2% is protected; and Nicaragua contains over 25% of inland swamp, of which 19% is protected.

3.6 DISCUSSION

In examining the adequacy of conservation area networks in tropical regions for protection of the full range of ecosystems, it is clear that this analysis of EFZs and moist forest types provides only a partial picture. A principal weakness is that neither classification recognises sufficiently the many centres of species diversity and endemism in the tropics, or numerous biogeographical boundaries and zones of convergence. Nevertheless, the analysis does provide an overview of the extent to which national protected area networks conserve a wide range of ecosystems, and this is elaborated further in the next section. The analysis also assists in the identification of priorities for conservation interventions at national and regional

levels. In this regard, it has been shown that a number of EFZs fall exclusively within the territory of single countries, highlighting their sole responsibility for conservation: in Africa - Kenya, Madagascar and South Africa; in South and South-East Asia - Cambodia, India, Malaysia, Myanmar, Pakistan, Sri Lanka and Vietnam; in Insular South-East Asia - Indonesia; in tropical South America - Brazil and Peru; in Central America and the Caribbean - Mexico. It has also been shown that the level of protection of EFZs varies widely and that some have no part of their area currently protected. This is true of two EFZs in Africa (EFZ 2 lowland rain forest and EFZ 18 wooded grassland with baobabs), four EFZs in South and South-East Asia (EFZ 14 evergreen and semi-evergreen forest, EFZ 19 deciduous and mixed forest, EFZ 31 temperate and alpine forest and scrub and EFZ 36 sub-tropical hill forest) and one EFZ in tropical South America (EFZ 8 cerrados).

3.6.1 Pantropical overview

An overview of protection of major EFZs and moist forest types in tropical regions of the world is provided in Tables 28 and 29, respectively. Some 7.7% of the tropics is protected (Table 28) and 12.2% of moist tropical forests are protected (Table 29). The more extensive protection of moist tropical forests suggests that the strategy to protect high biodiversity habitats is proving to be successful. However, the rapid rate of clearance of moist forests outside of protected areas will tend to artificially inflate the figure for protected area coverage (IUCN, 1992). Furthermore, a positive association between rate of forest clearance and species richness of tropical forests indicates that many forests rich in endemic species still receive little effective protection (Balmford and Long, 1994).

With respect to conservation of major EFZs, it is evident that the moist zones are better represented in protected areas than dry zones. Thus, lowland wet, lowland very moist, premontane moist and montane moist zones have 22%, 9%, 6% and 12% of their respective areas protected, whilst lowland very dry/sub-arid, lowland arid/desertic, premontane dry and montane dry zones have 7%, 5%, 3% and 2%, respectively protected (Table 28). Whilst, the priority given to moist zones may be justifiable in terms of biodiversity conservation, this study demonstrates the need to increase protected area coverage in drier zones. Also, it is widely recognised that future interventions in moist zones should begin to focus more on improving management of existing protected areas, particularly where protected areas coverage is considered to be adequate.

Regarding conservation of forest types, it can be seen that the two drier types (dry forest and pine forest) are poorly protected, with 4% and 2% coverage, respectively (Table 29). Of the moister forest types, sub-montane and montane rain forests and montane monsoon forest are particularly well protected, with 26%, 20% and 21% coverage, respectively, but inland swamp forest is comparatively poorly protected with only 5% coverage. Some 12% of lowland rain forest, which has been targeted as a pantropical habitat of exceptional biological richness, is currently protected.

3.6.2 Regional comparisons

The summary data in Tables 28 and 29 provides a framework in which to review regional protected area networks. At the regional level, South and South-East Asia is least well protected, with 3.6% of the region designated for conservation (Table 28). This is reflected in a relatively low protection status in all major zones. Conversely, the highest overall protection is found in South America with 9.8% of the region protected. In this case,

however, some major zones, notably lowland sub-dry (5) and lowland arid desertic (7) are poorly protected. Central America and the Caribbean also have a comparatively low regional percentage protection. However, some zones in this region are relatively well protected, particularly lowland very moist (2) and lowland arid/desertic (7). Overall, protection in Africa is close to the global average but there is a tendency for moist African zones to be relatively poorly protected and for dry African zones, excepting (11) montane dry, to be relatively well protected. Protection in Insular South-East Asia is above average, especially in montane zones (8, 10 and 12).

The lowest overall percentage protection by area of moist forests is found in Africa with 7.3% of forest cover protected (Table 29). Mangrove, inland swamp and lowland rain forest are all relatively poorly protected, the latter being well below the level of protection found in every other region. This is a matter of some concern, given the importance of this forest type for biodiversity. However, on a more positive note, it can be seen that some 20% of montane rain forest is protected in Africa. The same caveats referred to above, concerning the rate of deforestation and the distribution of biological richness within tropical forests, apply here.

South America, which has much the largest area of moist forests, has the highest regional protection (15.1%), and this is reflected in above average protection of all forest types. Protection of moist forests in South and South-East Asia (10.7%) is second only to that in South America but still below the global average. Its small area of inland swamp forest is well protected, but mangrove, montane rain forest and montane monsoon forest are relatively under-represented in protected areas. Protection of moist forests in Insular South-East Asia (10.4%) is below average. Some 50% of the small area of lowland monsoon forest is protected, but relatively little (9%) of the large area of lowland rain forest is protected. The overall protection of moist forests in Central America and the Caribbean (8.7%) is well below average. However, the low level of protection of dry forest and pine forest in the region masks the elevated protection status of the moister forest types. Significantly, some 20% of lowland rain forest is protected in the region.

It is apparent from Tables 28 and 29 that the ordering of regions by level of protection differs depending on whether the classification is of EFZs or moist forest types. This is partly because the classification of moist forest types excludes arid habitats. It is also partly the result of differences in classification of vegetation. For instance, some areas of Cambodia, Vietnam, Lao PDR and Thailand are classified as lowland rain forest in the moist forest analysis but as deciduous forest in the EFZ analysis. More importantly, the analysis of EFZs is concerned with potential vegetation formations whilst that of moist forest is concerned with actual forest cover. The former provides a national or regional overview of the spread of protected areas across potential habitats, the latter provides quantitative information on the level of protection of intact forest habitats.

4. INVESTMENTS IN PROTECTED AREAS

4.1 INDICATORS OF BIODIVERSITY

Before examining the pattern of investments in biodiversity conservation, it is useful to briefly examine two independently derived measures of biological diversity at the national level. In studying the extent to which EFZs and moist forest types are represented in protected areas, information has been provided on the number of EFZs occurring within each tropical country (Tables 3, 8, 13 and 18). These data provide an index of biological richness at the ecosystem level which may be compared with the National Biodiversity Index (NBI) developed by WCMC (1992c). The NBI is a measure of biological diversity at the species level, derived from information on numbers of species and endemics for higher plants and four classes of vertebrates. It rates every country on a scale of 0.00 to 1.00, based on the number of species known to exist, or potentially exist, in the country.

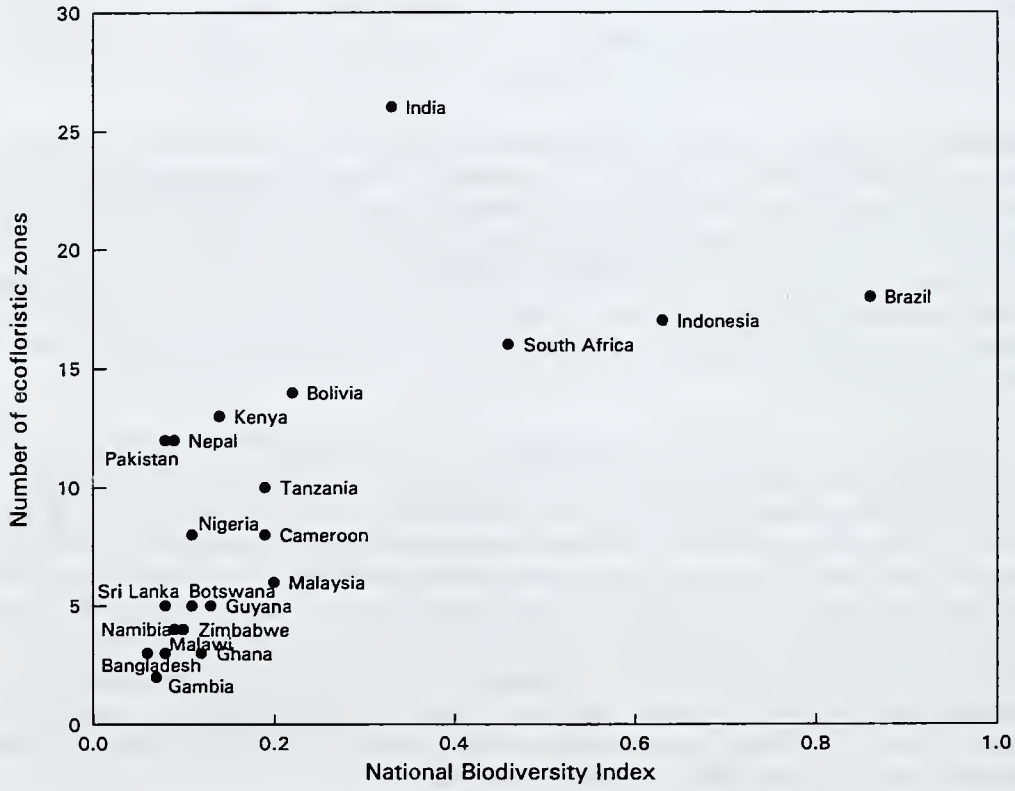


Figure 5 Relationship between two measures of biodiversity, EFZ and NBI which are representative of ecosystem and species diversity, respectively

These two indexes of richness appear to be closely related, although the relationship clearly is not linear (Figure 5). The number of EFZs is a decelerating positive function of the NBI, such that countries with a very high NBI, (e.g. South Africa, Indonesia and Brazil) have only slightly higher numbers of EFZs than countries with a considerably lower NBI. An exception to this trend is India which has markedly more EFZs in relation to its NBI. It is possible that the eco-climatic variation found within India has been more finely classified into EFZs than

for other tropical regions. It can also be seen in Figure 5 that the distribution of countries on the NBI scale is more heavily weighted towards the low end than is the distribution on the EFZ scale. While this study focuses on biodiversity at the ecosystem level and, therefore, utilises the EFZ index to identify gaps in investments in biodiversity conservation, it is also useful to employ the NBI as an additional, independent means of validation.

4.2 NATIONAL INVESTMENTS

The effect of biodiversity richness on the percentage of a country under protection is illustrated in Figure 6. No strong trend is apparent, but it can be seen that the four countries which are richest in biodiversity at both ecosystem and species levels (Brazil, India, Indonesia, and South Africa) have less than 10% of their territory protected. This indicates the need for greater development of protected area networks in countries richest in biodiversity. Many countries which are rich in biodiversity still possess significant portions of unconverted, natural land. They have the potential to establish representative networks of protected areas at a relatively early stage in their development, whilst population pressures on land do not pose immediate threats (James *et al.*, in press). This is true of countries such as Brazil, Cameroon and Indonesia, and perhaps to a lesser extent, South Africa.

Information on the level of national investment and staffing in protected areas is currently available for only 15 and 13 of the 25 UK priority countries, respectively (Table 30). In 1992, South Africa had much the largest financial investment and also the largest staff commitment, albeit by a smaller margin. However, these two indicators of investment in conservation are not closely related when examined across other countries. For instance, Namibia invested US$ 147.3 per sq. km and 5.0 staff per 1,000 sq. km, while Pakistan invested less financially (US$6.2 per sq. km) but more staff (102.4 per 1,000 sq. km), as shown in Table 30.

Excluding South Africa which has a comparatively well-developed economy, it can be seen that countries with a high diversity of EFZs tend to invest less in protected areas (Figure 7). In a worldwide analysis of protected area investments, a negative relationship between species diversity (as measured by NBI) and national investment in protected areas was also described, and this was attributed to the lesser wealth available for investment in biologically rich countries (James *et al.*, in press). In the present study, the negative trend is revealed amongst developing countries *per se*, suggesting that additional factors must play a role. Certain countries, such as Bolivia and Tanzania, which are rich in biodiversity and invest relatively little in protected areas, have nevertheless established extensive networks of protected areas. Assistance in establishing effective training programmes and institutional structures would be particularly valuable in these cases.

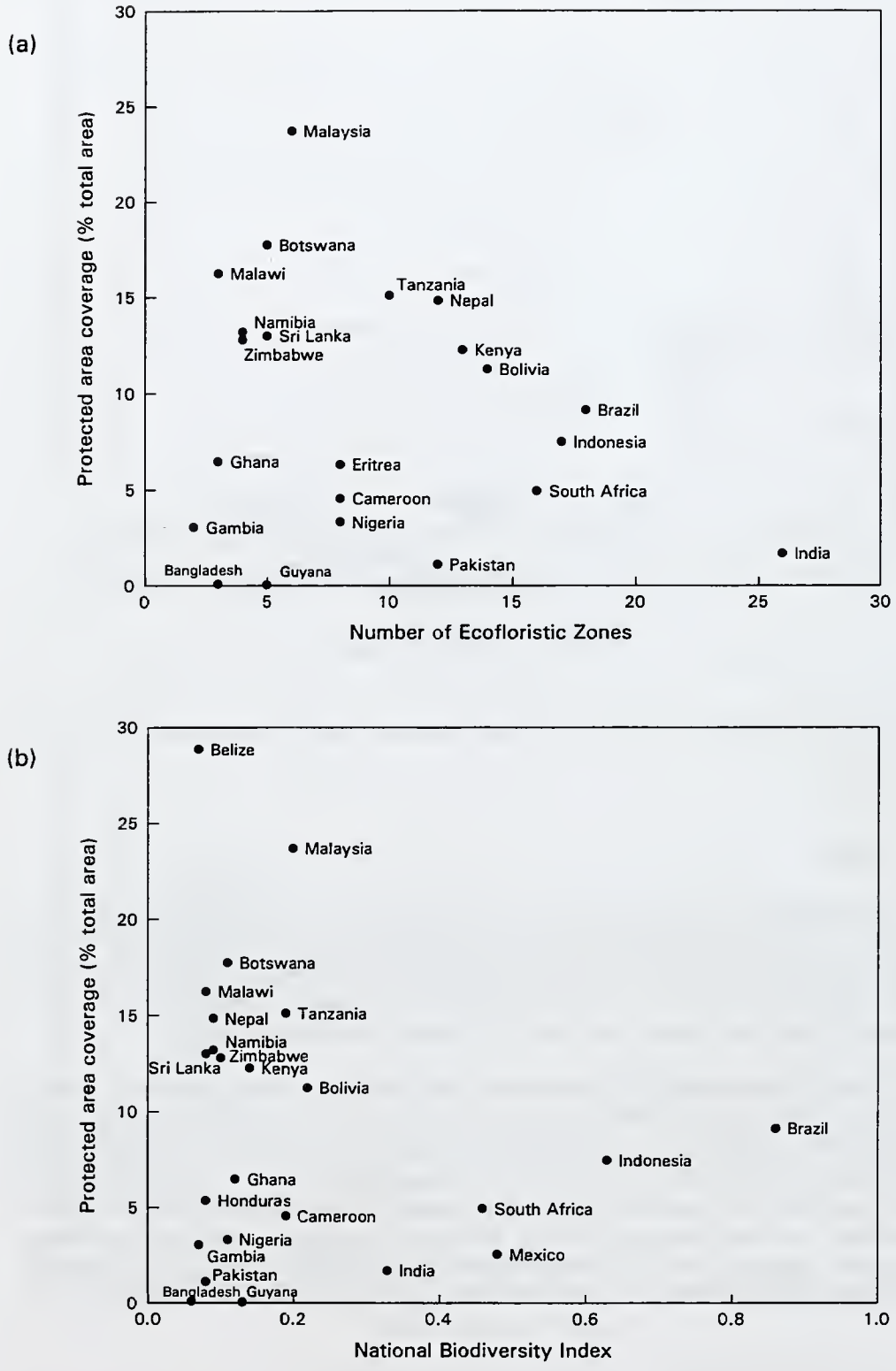


Figure 6 Priority given to protecting national biodiversity, based on (a) ecosystem and (b) species richness

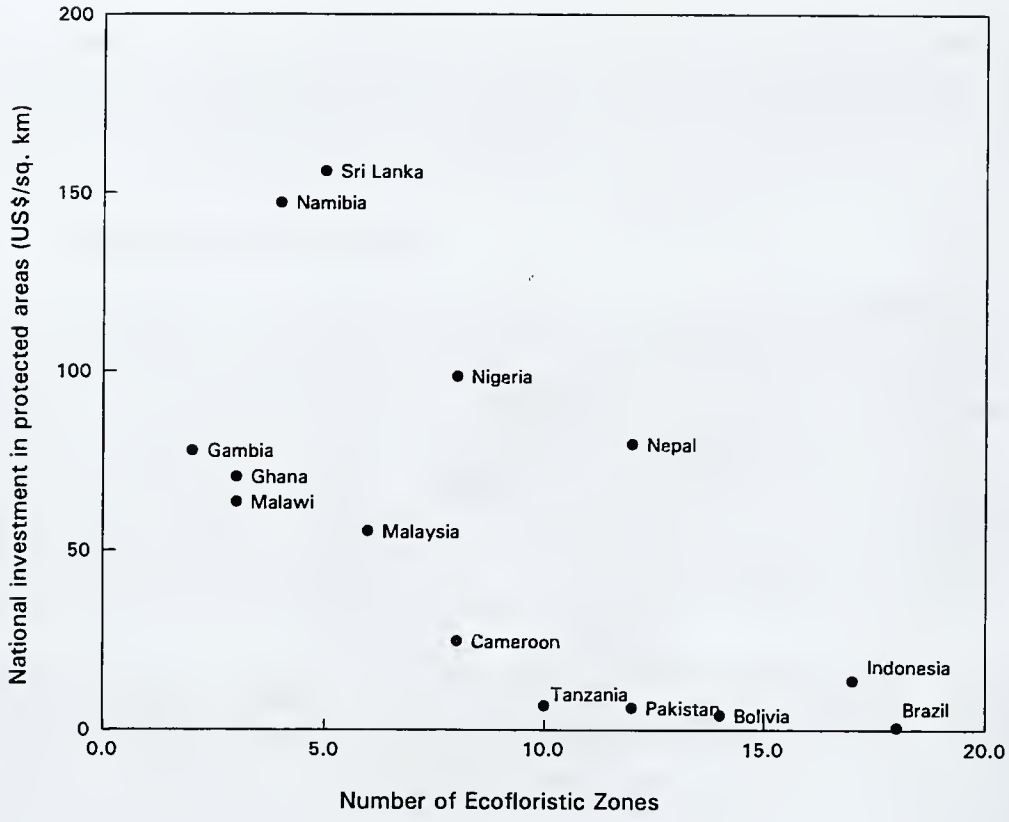


Figure 7 Effect of EFZ diversity on national investment in protected areas in 1992 (excluding South Africa)

4.3 ODA

Official Development Assistance (ODA) for biodiversity conservation in protected areas was received by 17 of 25 countries in 1992 (Table 30). Grants[4] were the most common form of aid, but for small amounts. Concessionary loans[5] were uncommon but for much larger amounts (Table 31). Loans are more appropriate in funding projects from which a commercial return is anticipated, such as in the forestry and fisheries sectors.

Levels of foreign aid commitments for protected area conservation are positively, if weakly, related to the EFZ index and NBI (Figure 8). The relationship is clearer in the case of the NBI (Figure 8b), although this is partly due to the absence of a data point for Mexico (highly diverse with nine Major Zones) in the EFZ plot (Figure 8a). This indicates that donors have tended to appraise the biological richness of a country in the process of allocating aid for conservation. The five countries receiving the highest amount of ODA for biodiversity conservation in protected areas are listed in Table 32. Each of these countries has a high NBI and/or a high number of EFZs. On the other hand, eight of the 25 countries received no aid

[4] A grant is the provision of funds by a donor that do not require reimbursement from the recipient government.

[5] A concessionary loan is the provision of funds by a donor as a loan which comprises a minimum of 25% grant element, thus qualifying as an ODA transaction.

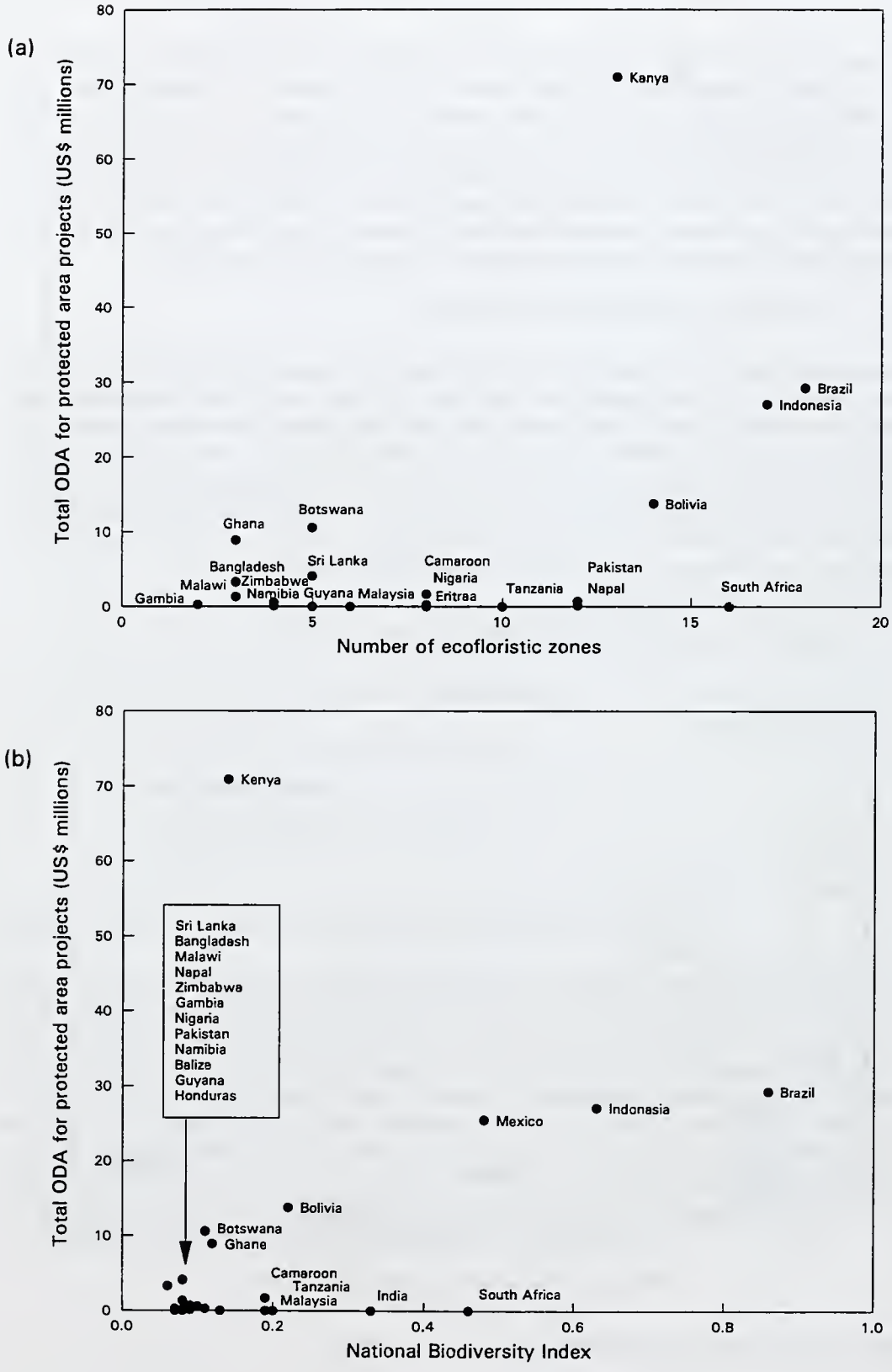


Figure 8 Effect of (a) EFZ and (b) NBI on ODA for protected area projects in 1992

for protected areas in 1992, and four of them are relatively rich in biodiversity (Table 33). Similar findings emerged from a global review of aid for biodiversity conservation in 1992 (WCMC, 1995). Differences between the amounts of aid reported in the two studies derive from the stricter criteria adopted in this study, which excludes large grants and concessionary loans for development in the forestry and fisheries sectors. These large aid interventions dwarf most of the smaller scale projects focused directly on biodiversity conservation. A similar positive association between biodiversity investment per unit area and number of restricted-range bird species has been reported by Balmford and Long (1995).

4.4 NATIONAL INVESTMENTS AND ODA

Previous work shows no evidence of aid substituting for national investments in protected areas, rather there is a weak tendency for countries with higher national investments to attract more ODA (WCMC, 1995). In the present study, which expresses both national investments and ODA per unit area protected, no such positive relationship is revealed (Figure 9). The distribution of ODA allocated in 1992 is patchy, making a substantial difference to the total investment in conservation in approximately one-third of countries (Table 30). Furthermore, it has little effect on the direction of a relationship in which the overall investment in protected areas is higher in countries with fewer EFZs (Figure 10).

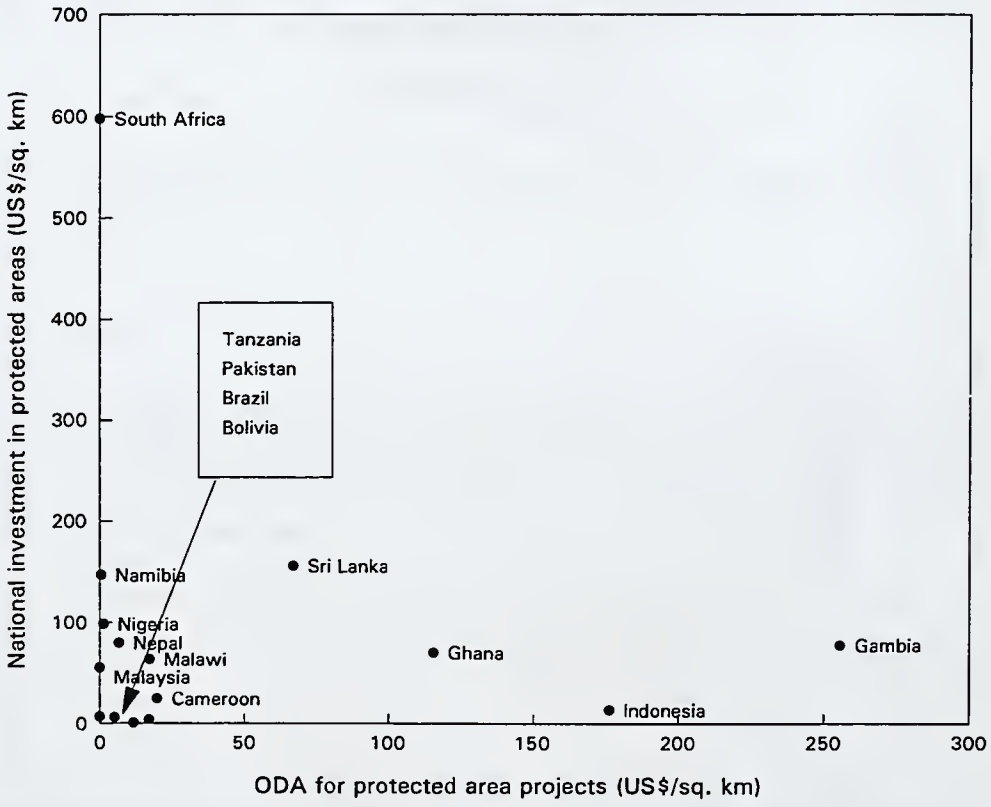


Figure 9 Government and donor assistance for protected areas in 1992

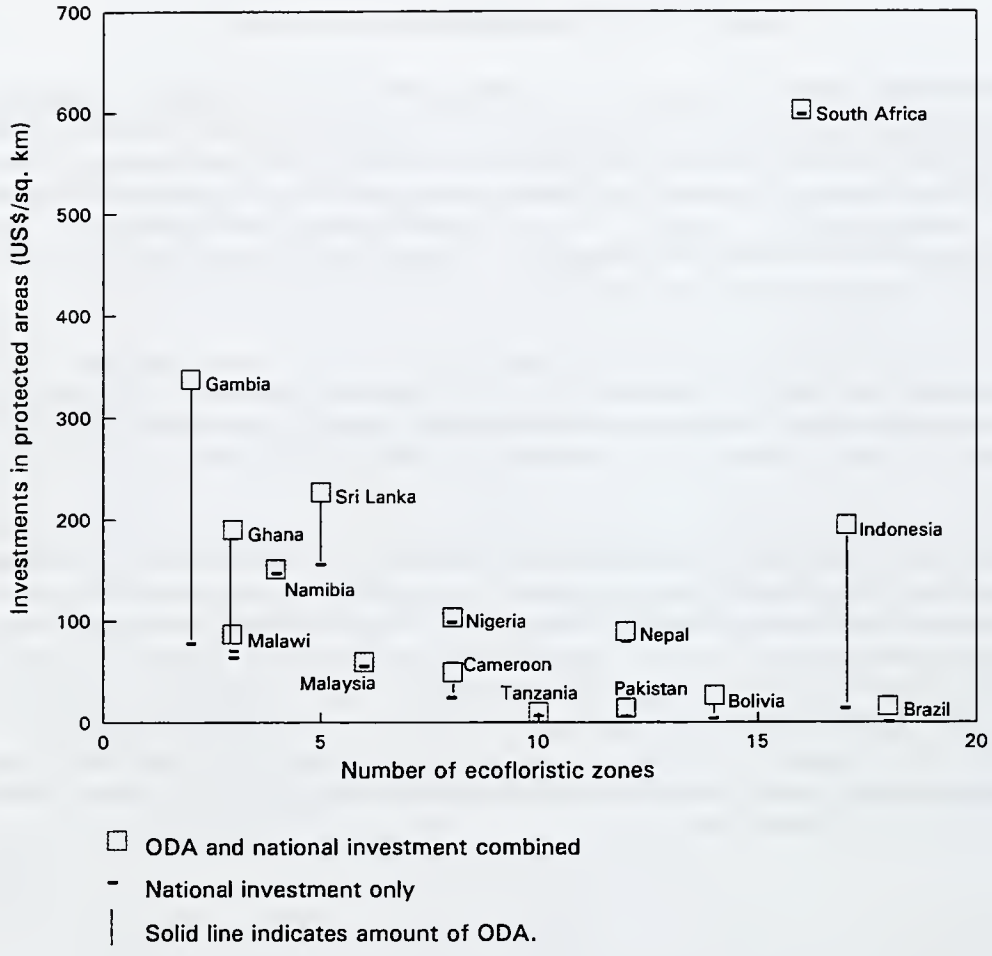


Figure 10 Effect of EFZ diversity on investments in protected areas in 1992

Recent political developments are partly responsible for the absence of ODA for biodiversity conservation in some countries. For example, Eritrea achieved independence in May 1993, and a multi-racial parliament was elected in South Africa in April 1994. Also, this study underestimates the overall extent of foreign investments in protected areas due to the absence of data for the NGO, corporate and private sectors. More detailed studies at national levels are required to generate such data. Nevertheless, the study emphasises the modest and ephemeral contribution of ODA towards protected area conservation. Moreover, major donor-funded conservation projects with a protected areas component are frequently of limited duration, providing insufficient time in which to establish management regimes that can be sustained subsequently by national protected area agencies.

5. CONCLUSIONS AND RECOMMENDATIONS

This study illustrates the strategic importance of using GIS datasets to quantify the adequacy of protected area networks in tropical countries. Foreign donors should be guided by the finding that protected area coverage varies between moist and dry habitats, between different types of moist forests, and between different tropical regions of the world. At the national level, donors should be guided by the priorities elaborated here regarding the sole responsibility of some countries for conservation of EFZs, and the lack of representation of some EFZs within protected area networks.

It is recommended that the present study is supplemented by a quantitative assessment of the representation of centres of species diversity, speciation and endemism within tropical protected area networks. Preliminary evidence suggests that many, possibly the majority, of endemic bird areas and centres of plant diversity are inadequately protected in some regions.

This study also highlights the need to procure data on the effectiveness of conservation within protected areas to better guide aid interventions. Countries with a high diversity of EFZs tend to invest less in protected areas conservation, and aid interventions do not adequately compensate for this disparity. The IUCN Commission on National Parks and Protected Areas is currently developing a system of monitoring and evaluating management effectiveness within protected areas. A tripartite information system on (1) representation of tropical ecosystems, habitats and species hot spots within protected areas, (2) effectiveness of protected area management, and (3) national and foreign investments in protected areas conservation would enable cost-effective strategies for conserving biodiversity in the tropics to be developed and monitored.

REFERENCES

Balmford, A. and Long, A. 1994. Avian endemism and forest loss. Nature 372, 623-624.

Balmford, A. and Long, A. 1995. Across-country analyses of biodiversity congruence and current conservation effort in the tropics. Conservation Biology, 9, 1539-1547.

FAO 1989. Classification and Mapping of Vegetation Types in Tropical Asia. Food & Agricultural Organization, Rome.

Green, M.J.B., Murray, M.G., Bunting, G.C. and Paine, J.R. 1996. WCMC Biodiversity Bulletin No. 1: Priorities for Biodiversity Conservation in the Tropics

IUCN 1991. The Conservation Atlas of Tropical Forests: Asia and the Pacific. Macmillan, London.

IUCN 1992. The Conservation Atlas of Tropical Forests: Africa. Macmillan, London.

IUCN 1993. Parks for Life: Report of the IVth World Congress on National Parks and Protected Areas. IUCN, Gland, Switzerland.

IUCN. 1996. The Conservation Atlas of Tropical Forests: the Americas. Simon & Schuster, London.

James, A.N., Green, M.J.B. and Paine, J.R. (in press). A Review of National Investments in Protected Areas. World Conservation Monitoring Centre, Cambridge, UK.

Lavenu F., Bellan M.F. and Meste C. 1988. Carte Eco-floristique de l'Amerique du Sud. FAO, Rome.

McNeely J.A. and Miller K.R. (Eds) 1984. National Parks, Conservation, and Development; The Role of Protected Areas in Sustaining Society. Smithsonian Institution, Washington, D.C.

Sharma, M.K. 1986. Eco-floristic Zone and Vegetation Maps of Tropical Continental Asia. Scale 1:5,000,000. FAO, Rome.

Sharma, M.K. 1988. Eco-floristic Zone Map of Africa. Scale 1:5,000,000. FAO, Rome.

WCMC 1992a. Global Biodiversity. Chapman and Hall, London.

WCMC 1992b. Tropical Managed Areas Assessment: A Contribution to the FAO Forest Resources Assessment. Unpublished report to the UK Overseas Development Administration. World Conservation Monitoring Centre, Cambridge, UK.

WCMC 1992c. Development of a National Biodiversity Index. Unpublished report. World Conservation Monitoring Centre, Cambridge, UK.

WCMC 1995. The Global Distribution of Foreign Aid for Biodiversity Conservation. Unpublished report to the European Commission. World Conservation Monitoring Centre, Cambridge, UK.

TABLES

Table 1 Key to major zones and respective ecofloristic zones for tropical regions. Each ecofloristic zone is described in terms of its main vegetation types, bioclimatic parameters (rainfall, altitude) and geographic distribution. (Sharma, 1986, 1988; Laven et al., 1988; FAO, 1989).

Major Zone DESCRIPTION	Tropical Africa EFZ Code	EFZ Class	EFZ Description	South and South-East Asia EFZ Code	EFZ Class	EFZ Description
1 LOWLAND WET	4	Ic	COASTAL EVERGREEN RAIN FOREST Swamp forest, mangrove & evergraen rain forest >3,000mm, low altitude Cameroon, Guinea, Liberia, Nigeria, Sierra Leone			
2 LOWLAND VERY MOIST	1	Ia,IIa	GUINEO-CONGOLIAN LOWLAND RAIN FOREST Swamp forest, edaphic grassland & mangrove >1,600mm, <1,000m Cameroon, Congo, Equatorial Guinea, Gabon, Zaire	3	Ia,IIa	LOWLAND EVERGREEN & HILL FOREST Mangrove, swamp & heath forest; flooded grassland, limestone vegetation >2,000mm, <1,000m Peninsular Malaysia, S. Thailand
	2	Ib	LOWLAND RAIN FOREST <1,600mm, <300m Madagascar	4	Ic	LOWLAND SEMI-/EVERGREEN & SAL FOREST Mangrove, swamp forest >2,000mm, <500m Cambodia, India, Myanmar, Thailand, Vietnam
	3	IIb	LOWLAND RAIN FOREST <1,600mm, 300-800m Madagascar	S		LOWLAND SEMI-/EVERGREEN & SAL FOREST Bangladesh, Bhutan, Cambrodia, NE India, Laos, Myanmar, E Nepal, Thailand, Vietnam
					Ic	see above
					IIc	see below
	6	Ie,IIe	LOWLAND RAIN FDREST >2,000mm, <800m Madagascar	6	Id,IId	LOWLAND SEMI-/EVERGREEN FOREST Mangrove, swamp forest, riparian forest >2,000mm, <1,000m Peninsular India , Central Sri Lanka
				14	IIc	SEMI-/EVERGREEN & SAL FOREST 500-1,000m Vietnam
				1S	IId,IIId	SEMI-/EVERGREEN & SEMI-/DECIDUOUS FOREST Mangrove, swamp & riparian forest >1,000mm, <1,000m India
3 LOWLAND MOIST WITH SHORT DRY SEASON	S	Id,IId	DRY (SEMI-) EVERGREEN RAIN FOREST Riparian forest, swamp forest, edaphic grassland & mangrove 1,000-2,000mm, <1,000m Angola, Benin, Cameroon, C. African R., Congo, Gabon, Ghana Guinea, Cote d'Ivoire, Liberia, Nigeria, Sierra Leone, Togo, Zaire			
	7	If	LOWLAND (SEMI-) EVERGREEN RAIN FOREST 900-1,200mm Kenya coast, Mozambique, Tanzania			
	8	Ig,IIg	(SEMI-) EVERGREEN FOREST 800-1,200mm, 300-800m South Africa			
4 LOWLAND MOIST WITH LONG DRY SEASON	9	IIIa	DRIER SEMI-EVERGREEN RAIN FOREST Swamp forest & edaphic grassland 1,500-2,000mm Guinea, Guinea Bissau, Senegal, Sierra Leone	24	IIIc1	SEMI-/DECIDUOUS & MIXED FOREST Riparian forest 1,500-2,000mm, <1,000m NE India, Kampuchea, Laos, Myanmar, Sri Lanka, Thailand, Vietnam
	10	IIIb	SUDANIAN WOODLAND & DRY EVERGREEN FOREST Flooded grassland 1,000-1,500mm Benin, Burkina Faso, Cameroon, C. African R., Gambia, Ghana, Guinea	2S	IIIc2	DECIDUOUS FOREST Periodic swamp, flooded grassland >1,000mm, <1,000m Western Himalaya foothills (India, Nepal)
	11		SUDANIAN WOODLAND, DRY EVERGREEN FOREST, SAVANNA Sudan, Uganda	26	IIId1	SEMI-/EVERGREEN & SEMI-/DECIDUOUS FOREST Mangrove, swamp & riparian forest >2,000mm, <1,000m Peninsular India
		IIIb	see above			
		IVa	see below			
	12	IIIc	DRY DECIDUOUS FOREST 1,000-12,000mm Madagascar	27	IIId2	MOIST DECIDUOUS FOREST Mangrove >2,000mm, <1,000m Peninsular India (W. coast)
	13	IIId	ZAMBEZIAN MIOMBO & DRY EVERGREEN FOREST Flooded grassland 900-1,500mm Angola, Malawi, Mozambique, Tanzania, Zaire, Zambia	28	IIId3	DECIDUOUS FOREST Mangrove 1,000-2,000mm, <1,000m India
				29	IIId4	SEMI-/DECIDUOUS & MIXED FOREST <1,000m Cambodia
5 LOWLAND SUB-DRY	14	IIIe	DECIDUOUS WOODLAND 500-800mm Botswana, Mozambique, Zimbabwe, South Africa	7	Vb	LOWLAND DECIDUOUS FOREST 500-1,000mm, <1,000m Vietnam
	1S	IIIf	DECIDUOUS FOREST Swamp forest & flooded grassland 800-1,000mm Kenya coast, Mozambique, Tanzania, South Africa	8	Vc1	DRY DECIDUOUS FOREST 500-1,000mm, <1,000m Peninsular India
	16	IVa	WOODLAND & SAVANNA Flooded grassland & woodland 750-1,000mm Benin, Burkina Faso, Cameroon, C. African R., Ethiopia, Gambia, Mali, Nigeria, Senegal, Sudan, Uganda	9	Vc2	DRY DECIDUOUS, THORN, MANGROVE & SWAMP FOREST Mangrove, brakish water swamp 500-1,000mm, <1,000m India, Myanmar, Pakistan
	17	IVb	DRY EVERGREEN FOREST & GRASS SAVANNA Flooded grassland 700-1,000mm Benin, Ghana, Togo	16	IVc	DECIDUOUS & MIXED FOREST Mangrove, periodic swamp, flooded grassland 1,000-1,500mm, <1,000m Kampuchea, Laos, Myanmar, Thailand, Vietnam

Insular South–East Asia			Tropical South America			Major Zone
EFZ Code	EFZ Class	EFZ Description	EFZ Code	EFZ Class	EFZ Description	DESCRIPTION
			1	Ia	MOIST FOREST Lowland swamp forest 0 dry months, >3,000mm Brazil, Colombia, Ecuador, F. Guiana, Peru, Venezuela	1 LOWLAND WET
1	Ia	EVERGREEN FOREST: WEST OF WALLACE'S LINE Mangrove >2,000mm, <500m (Brunei), (Indonesia), (Malaysia), Philippines	2	Ib	MOIST FOREST Lowland swamp forest 1–3 dry months, 2,000–3,000mm Brazil, Colombia, Ecuador, F.Guiana, Guyana, Peru, (Suriname), Venezuela	2 LOWLAND VERY MOIST
2	Ia,IIa	EVERGREEN FOREST: WEST OF WALLACE'S LINE Mangrove, swamp, peat, heath & coastal fringe forest, flooded grassland >2,000mm, <1,500m Indonesia, Malaysia				
3	Ib	EVERGREEN FOREST: EAST OF WALLACE'S LINE <500m Indonesia				
4	Ib,IIb	EVERGREEN FOREST: EAST OF WALLACE'S LINE Mangrove, swamp & coastal fringa forest, flooded grassland >1,500mm, <1,400m Indonesia, Papua New Guinea				
5	IIa	EVERGREEN FOREST: WEST OF WALLACE'S LINE Distinct floristic, physiognomic & edaphic sub–types >2,000mm, 500–1,000m (Indonesia) Philipines				
6	IIb	EVERGREEN FOREST: SUMBA (500–1,400m) 500–1,400m Indonesia				
7	IIIa	MOIST SEMI–DECIDUOUS FOREST Mangroves >2,000mm (Indonesia) Philippines	3	II	EVERGREEN FOREST Edaphic grassland 0–4 dry months, 1,000–2,000mm Bolivia, Brazil, (Colombia), Ecuador, Peru, Venezuela	3 LOWLAND MOIST WITH SHORT DRY SEASON
8	IIIb	VERY MOIST SEMI–DECIDUOUS FOREST Indonesia, (Papua New Guinea)	4	IIa	(SEMI–) EVERGREEN FOREST 2–4 dry months Bolivia, Brazil, (Ecuador), (F.Guiana), (Guyana), Paraguay, Peru, (Suriname), Venezuela	
			S	IIb	TROPICAL & SUB–TROPICAL EVERGREEN FOREST 0–4 dry months Atlantic zone of Brazil	
			6	IIc	EVERGREEN FOREST 0 dry months Brazil, Paraguay	
9	IVa	DECIDUOUS FOREST Mangrove, dry forest on limestone >2,000mm, (Indonesia) Philippines	7	III	MOIST DECIDUOUS FOREST & GRASSLAND 3–5 dry months, 1,000–2,000mm Argentina, Bolivia, Brazil, Colombia, Ecuador, Paraguay, (Peru), Venezuela	4 LOWLAND MOIST WITH LONG DRY SEASON
10	IVb	DRY DECIDUOUS FOREST 1,000–2,000mm, Indonesia, Malaysia	8	IIIa	CERRADOS GRASSLAND Swamp & edaphic grassland Argentina, Brazil, Colombia	
			9	IIIb	DECIDUOUS THORN SHRUB Bolivia, Brazil, Colombia, Ecuador,	
			10	IIIc	XEROMORPHIC SHRUB Argentina, Bolivia, Brazil, Colombia, Guyana, Suriname, Venezuela	
			11	IIId	SWAMP GRASSLAND (PANTANAL) Bolivia, Brazil, Paraguay	
			12	IIIe	SEMI–EVERGREEN FOREST Argentina, Bolivia, Brazil, Paraguay	
11	IVc	DECIDUOUS FOREST: NEW GUINEA Flooded grassland, mangrove 1,000–1,500mm (Indonesia) Papua New Guinea	13	IV	DECIDUOUS FOREST, CAATINGA 5–8 dry months, 500–1,000mm Argentina, Bolivia, Brazil, Colombia, Ecuador, Paraguay, Peru, Venezuela	5 LOWLAND SUB–DRY
12	Va	DECIDUOUS FOREST, SCLEROPHYLLOUS THICKET: L. SUNDAS Swamp evergreen forest 500–1,000mm Indonesia	14	IVa	CAATINGA: SCLEROPHYLLOUS & XEROMORPHIC FOREST Brazil, Colombia, Venezuela	
			15	IVb	DRY SEMI–DECIDUOUS FOREST Colombia, Venezuela	
			16	IVc	DRY SEMI–DECIDUOUS FOREST Argentina, Bolivia, (Brazil), Colombia, Paraguay, Venezuela	

Major Zone DESCRIPTION	Tropical Africa			South and South–East Asia		
	EFZ Code	EFZ Class	EFZ Description	EFZ Code	EFZ Class	EFZ Description
5 LOWLAND SUB–DRY (continued)	18	IVc	WOODED GRASSLAND WITH 'ADANSONIA DIGITATA' (BAOBAB) 800–1,000mm Angola, Zaire	17		DECIDUOUS, THORN & MIXED FOREST Myanmar
					IVc	see above
					Vc2	see above
	19	IVd	ZAMBEZIAN MIOMBO, MOPANE, DRY DECIDUOUS FOREST Floodad grassland & aquatic vegetation 500–1,000mm Angola, Botswana, Malawi, Mozambique, Namibia, Tanzania, Zaire Zambia, Zimbabwe	18	IVd1	DRY DECIDUOUS FOREST Mangrove, brakish watar swamp 1,000–1,500mm, <1,000m Peninsular India
	22	Vc	DRY DECIDUOUS FOREST & DECIDUOUS THICKET 400–1,000mm Madagascar	19	IVd2	DRY EVERGREEN FOREST Seasonal tanks with hygrophytes & Acacia arabica 1,000–1,500mm, <1,000m S.E. India, Sri Lanka
6 LOWLAND VERY DRY / SUB–ARID	20	Va	VERY DRY SAVANNA & STEPPE Floodad grassland 400–750mm Burkina Faso, Cameroon, Chad, Ethiopia, Mali, Mauritania, Niger Nigeria, Senegal, Sudan	22	VI	THORN FOREST & PSEUDO–STEPPE Mangrove & brakish water swamp 200–500mm, <1,000m India, Pakistan
	21	Vb	DRY SAVANNA, STEPPE & THICKET 400–750mm Ethiopia, Kenya, Somalia, Tanzania			
	23	Vd	STUNTED SCRUB WOODLAND & THICKET 350–500mm Botswana, Mozambique, Namibia, Zimbabwe, South Africa			
	32	Xb	TREE & BUSH PSEUDO–STEPPE <400mm Burkina Faso, Chad, Ethiopia, Mali, Mauritania, Niger, Senegal, Sudan			
	33	Xc	TREE & BUSH PSEUDO–STEPPE 200–400mm Ethiopia, Kenya, Somalia, Tanzania, Uganda			
	34	Xd	DECIDUOUS THICKET & SHRUB PSEUDO–STEPPE <400mm Madagascar			
	35	Xe	TREE & SHRUB PSEUDO–STEPPE 200–350mm Angola, Botswana, Namibia, South Africa			
7 LOWLAND ARID/ DESERTIC	36	XIa	STEPPE & SHRUB PSEUDO–STEPPE Halophytic vegetation <200mm Algeria, Chad, Egypt, Libya, Mali, Mauritania, Morocco, Niger, Sudan	30	VII	PSEUDO–STEPPE Salt marsh, sand dune <200mm, <1,000m India, Pakistan
	37	XIb	SHRUB PSEUDO–STEPPE & STEPPE <200mm Ethiopia, Somalia			
	38	XIc	SHRUB PSEUDO–STEPPE & STEPPE <200mm Angola, Botswana, Namibia,, South Africa			
8 PREMONTANE MOIST	39	XIIa	TRANSITION FOREST 1,100–2,000mm, 1,000–1,800m Burundi, Cameroon, C. African R., Ethiopia, Guinea, Madagascar Rwanda, Uganda, Zaire	32	VIIIa	DIPTEROCARP & MONTANE OAK FOREST >2,000mm, 1,000–1,600m Peninsular Malaysia
	40	XIIa,XIIb	TRANSITION FOREST <1,000mm, 800–1,800m Burundi, Cameroon, C. African R., Ethiopia, Guinea, Madagascar Rwanda, Uganda, Zaire	33		MONTANE FOREST Peninsular Malaysia
					VIIIa	see above
					Xa	MONTANE ERICACEOUS & OAK FOREST >2,000mm, >1,600m Peninsular Malaysia
	41	XIIb	TRANSITION FOREST >1,500mm, 800–1,800m Madagascar	34	VIIIc	LOWER MONTANE, SUB–TROPICAL & EVERGREEN HILL FOREST Riparian forest >2,000mm, 1,000–1,800m Bhutan, NE India, Kampuchea, Laos, Myanmar, E. Nepal, Thailand, Vietnam
	42	XIIc	TRANSITION FOREST & WOODLAND 1,100–1,800mm, 1,000–1,800m Angola, Zaire, Zambia	35		MONTANE & TEMPERATE MIXED FOREST Bhutan, NE India, Myanmar, Nepal
					VIIIc	see above
					Xc	see below
	43	XIId	TRANSITION WOODLAND & FOREST 1,000–1,500mm, 1000–2,000m Ethiopia, Nigeria, Uganda	36	VIIId	SUB–TROPICAL HILL FOREST >1,500mm, 1,000–1,800m Peninsular India , Sri Lanka
	44		TRANSITION WOODLAND & EVERGREEN THICKET Ethiopia, Somalia	37		HILL & MONTANE FOREST Peninsular India, Sri Lanka
		XIId	see above		VIIId	see above
		XIIf	see below		Xd	MONTANE WET TEMPERATE FOREST & SHOLA >1,000mm, >1,800m Peninsular India, Sri Lanka
	45	XIIe	SCLEROPHYLLOUS MONTANE FOREST & TAPIA FOREST 1,000–2,000mm, 800–1,800m Madagascar	38	VIIIe	SUB–TROPICAL PINE FOREST Riparian forest 1,000–2,000mm, 1,000–1,800m Western Himalayas (India, Nepal, Pakistan)
				39		SUB–TROPICAL PINE & HIMALAYAN TEMPERATE FOREST India, Nepal, Pakistan
					VIIIe	see above
					Xe	see below

Insular South–East Asia			Tropical South America			Major Zone
EFZ Code	EFZ Class	EFZ Description	EFZ Code	EFZ Class	EFZ Description	DESCRIPTION
						5 LOWLAND SUB–ORY (continued)
			17	V	XEROMORPHIC FOREST 8–9 dry months, 200–500mm Chile, Colombia, Ecuador, Peru, Venezuela	6 LOWLAND VERY DRY / SUB–ARID
			18	VI	DESERTIC ZONE 10–12 dry months, <200mm Chile, Peru	7 LOWLAND ARID/ DESERTIC
13	VIIIa	MONTANE EVERGREEN FOREST: WEST OF WALLACE'S LINE Riparian forest, flooded or marshy grassland >2,000mm (Indonesia), (Malaysia) Philippines	19	VIIa	CERRADOS, SEMI–EVERGREEN FOREST (Bolivia), Brazil, (Paraguay)	8 PREMONTANE MOIST
14	VIIIb	MONTANE EVERGREEN FOREST: EAST OF WALLACE'S LINE Flooded grassland >2,000mm, 1,400–2,400m (Indonesia), Papua New Guinea	20	VIIb	EVERGREEN FOREST Argentina, Brazil	
			29	XI	OMBROPHYLLOUS & SUB–MONTANE FOREST >2,000mm, 1,000–2,000m Bolivia, Brazil, Colombia, (Guyana), Peru, Vanezuela	
			30	XII	EVERGREEN FOREST WITH COOL SEASON 1,500–2,000mm Argentina, Brazil, Colombia, Ecuador, Venezuela	
			31	XIIa	(SUB)TROPICAL SUBMONTANE EVERGREEN FOREST 1,500–2,000mm Argentina, (Bolivia), (Brazil), Colombia, Ecuador, Peru, Venezuela	
			32	XIIb	DENSE EVERGREEN FOREST 1,000–2,000m Brazil	
			33	XIII	SEMI–EVERGREEN SUBMONTANE OR DECIDUOUS FOREST 1,000–1,500mm Ecuador, Peru, Venezuela	

Major Zone DESCRIPTION	Tropical Africa EFZ Code	EFZ Class	EFZ Description	South and South–East Asia EFZ Code	EFZ Class	EFZ Description
9 PREMONTANE DRY	49	XIIIc	TRANSITION FOREST 600–1,000mm, 800–1,500m South Africa, Swaziland	20	IXc1	SUB–TROPICAL DRY EVERGREEN FOREST 500–1,000mm, 300–1,500m India, Pakistan
	50	XIIId	HIGHVELD GRASSLAND 500–800mm, 1,000–1,500m South Africa	21	IXc2	Pseudo–steppe Riparian forest <1,500mm, <1,800m N. W. Pakistan
	51	XIIIe	SCRUB FOREST & (SEMI–) EVERGREEN THICKET 600–1,000mm, 1,000–1,800m Burundi, Rwanda, Tanzania, Uganda			
	52	XIIIf	(SEMI–) EVERGREEN SHRUB & THICKET <1,000mm, 1,500–2,000m Ethiopia, Kenya, Somalia, Sudan, Tanzania, Uganda			
	53		EVERGREEN SHRUB & THICKET, MONTANE EVERGREEN FOREST Kenya XIIIf see above XIVb see below			
	54		EVERGREEN SHRUB & THICKET, 'JUNIPERUS PROCERA' FOREST Kenya, Somalia, Sudan, Uganda XIIIf see above XVc see below			
10 MONTANE MOIST	56	XIVb	MONTANE EVERGREEN FOREST 1,200–2,500mm, 1,800–3,000m Angola, Burundi, Cameroon, Ethiopia, Kenya, Malawi, Mozambique Rwanda, Tanzania, Uganda, Zaire, Zimbabwe	10	Xc	MONTANE TEMPERATE FOREST >2,000mm, 1,800–3,000m Bhutan, India, Laos, Myanmar, Nepal, Thailand & Vietnam
	57	XIVc	MONTANE EVERGREEN BUSHLAND & THICKET >1,500mm, >1,800m Madagascar	11		MONTANE, TEMPERATE & SUB–ALPINE FOREST Bhutan, India, Myanmar, Nepal Xc see above XII TEMPERATE & SUB–ALPINE FOREST 3,000–4,000mm Bhutan, India, Myanmar, Nepal, Pakistan
	58	XIVd	MONTANE EVERGREEN FOREST 500–1,100mm, 1,500–2,900m South Africa	12	Xe	WESTERN HIMALAYAN MOIST TEMPERATE FOREST 'Cupressus' (Cypress) forest 1,000–2,000mm, 1,800–3,000m Western Himalayas (India, Nepal, Pakistan)
	61	XVc	'JUNIPERUS PROCERA' FOREST <1,200mm, 2,000–3,000m Kenya, Ethiopia, Somalia, Sudan	13		HIMALAYAN MOIST TEMPERATE & SUB–ALPINE FOREST India, Nepal, Pakistan Xe see above XII see above
11 MONTANE DRY	62	XVd	MONTANE EVERGREEN SCRUB 500–800mm, 1,500–2,900m Lesotho, South Africa	23	XI	HIMALAYAN DRY TEMPERATE FOREST <1,000mm, 2,000–3,000m India, Pakistan
12 ALPINE	64	XVIb	ALPINE SCRUB >3,000m Ethiopia, Kenya, Tanzania	31		MOIST TEMPERATE, SUB–ALPINE & ALPINE FOREST Pakistan XII see above XIII see below
	65	XVIc	ALPINE SCRUB >2,900m South Africa	40	XIII	ALPINE SCRUB >4,000m Bhutan, India, Myanmar, Nepal, Pakistan
				41		ALPINE STEPPE, DWARF JUNIPER SCRUB India, Nepal, Pakistan XIII see above XIV DWARF Juniperus SCRUB & ALPINE SCRUB <200mm, 2,500–4,500m Himalayas
13 MEDITERRANEAN	25	VIb	MEDITERRANEAN ZONE >800mm South Africa			
	27	VIIb	MEDITERRANEAN ZONE 500–1,000mm South Africa			
	29	VIIIb	MEDITERRANEAN ZONE <500mm South Africa			
	30	IX	TEMPERATE FOREST >800mm South Africa			

Note: In the case of Insular South–East Asia and Tropical South America, there are discrepancies between the published geographic distribution of ecofloristic zones (FAO, 1989) and the digital map of ecofloristic zones produced by FAO. Countries not listed by FAO (1989), but falling within the range of a given ecofloristic zone are shown in brackets.

Insular South–East Asia			Tropical South America			Major Zone
EFZ Code	EFZ Class	EFZ Description	EFZ Code	EFZ Class	EFZ Description	DESCRIPTION
			34	XIV	DECIDUOUS & SUBMONTANE, XEROMORPHIC FOREST 200–1,000mm Colombia, Ecuador, Peru, Venezuela	9 PREMONTANE DRY
15	IXa	MONTANE THICKET, CONIFEROUS FOREST: EAST OF WALLACE'S LINE >2,000mm, 2,400–4,000m Indonesia, Malaysia	35	XV	MOIST MONTANE FOREST >2,000mm, 2,000–2,500m Bolivia, Colombia, Ecuador, Peru, Venezuela	10 MONTANE MOIST
16	IXb	MONTANE THICKET, CONIFEROUS FOREST: EAST OF WALLACE'S LINE >2,000mm, 2,400–4,000m (Indonesia), Papua New Guinea	36	XVI	CLOUD FOREST 1,500–2,000mm, 2,000–3,500m Colombia, Ecuador, Peru, Venezuela	
			37	XVII	SEMI–EVERGREEN MONTANE FOREST 2,000–3,500m (Bolivia), Colombia, Ecuador, Peru, Venezuela	
			38	XVIII	DECIDUOUS MONTANE FOREST Bolivia, Colombia, Peru	11 MONTANE DRY
17	Xb	ALPINE GRASSLAND & SCRUB: NEW GUINEA 4,000–4,500m (Indonesia), Papua New Guinea	39	XIX	ANDEAN GRASSLAND Bolivia, Colombia, Ecuador, Peru, Venezuela	12 ALPINE
						13 MEDITERRANEAN

Table 2 Key to forest types and other land cover classes for the tropics

Code	Description
10	Water bodies
111	Mangrove
112	Degraded mangrove
113	Inland Swamp
114	Degraded inland swamp
120	Lowland/montane rain forest
121	Montane rain forest
122	Lowland rain forest
123	Sub–montane rain forest
130	Degraded rain forest
131	Degraded montane rain forest
132	Degraded lowland rain forest
133	Degraded sub–montane rain forest
210	Montane monsoon forest
220	Lowland monsoon forest
230	Degraded monsoon forest
500	Dry forest
510	Pine forest
888	Cloud cover
900	Non–forest
999	No data

Table 3 Number of ecofloristic zones within tropical African countries

Country	ISO code	Area sq. km	% total area	No. EFZs
Angola	AGO	1,246,700	5.19	9
Benin	BEN	112,620	0.48	4
Botswana	BWA	575,000	2.39	5
Burkina Faso	BFA	274,122	1.14	4
Burundi	BDI	27,835	0.11	3
Cameroon	CMR	475,500	1.93	8
Central African Republic	CAF	624,975	2.58	5
Chad	TCD	1,284,000	5.26	7
Congo	COG	342,000	1.42	2
Cote d'Ivoire	CIV	322,465	1.33	3
Djibouti	DJI	23,000	0.09	1
Equatorial Guinea	GNQ	28,050	0.11	3
Eritrea	ERI	93,679	0.50	8
Ethiopia	ETH	1,098,000	4.68	11
Gabon	GAB	267,665	1.10	2
Gambia	GMB	10,690	0.04	2
Ghana	GHA	238,305	0.99	3
Guinea	GIN	245,855	1.01	5
Guinea–Bissau	GNB	36,125	0.14	3
Kenya	KEN	582,645	2.42	13
Liberia	LBR	111,370	0.40	3
Madagascar	MDG	594,180	2.45	9
Malawi	MWI	94,080	0.49	3
Mali	MLI	1,240,140	5.18	5
Mauritania	MRT	1,030,700	4.31	3
Mozambique	MOZ	784,755	3.26	7
Namibia	NAM	824,295	3.41	4
Niger	NER	1,186,410	4.90	4
Nigeria	NGA	923,850	3.77	8
Rwanda	RWA	26,330	0.10	3
Senegal	SEN	196,720	0.81	5
Sierra Leone	SLE	72,325	0.30	4
Somalia	SOM	630,000	2.63	6
South Africa	ZAF	1,184,825	5.17	16
Sudan	SDN	2,505,815	10.38	16
Tanzania	TZA	939,760	3.89	10
Togo	TGO	56,785	0.24	3
Uganda	UGA	236,580	1.00	9
Zaire	ZAR	2,345,410	9.66	10
Zambia	ZMB	752,615	3.11	4
Zimbabwe	ZWE	390,310	1.62	4
Regional totals		24,036,486	100	56

Table 4 Conservation status of ecofloristic zones in tropical Africa*

EFZ code	EFZ short description	EFZ area (ha)	EFZ area % region	% total EFZ protected					Countries with >25% of EFZ
				0%	<1%	1–5%	5.1–10%	>10%	
1	Lowland rainforest	104,934,270	4.33				*		Zaire
2	Lowland rainforest	18,273	0.00	*					Madagascar
3	Lowland rainforest	9,000,190	0.37			*			Madagascar
4	Swamp forests & mangrove	10,555,722	0.44			*			Sierra Leone
5	Dry evergreen rainforest	270,309,534	11.16			*			Zaire
6	Lowland rainforest	319,369	0.01		*				Madagascar
7	Lowland semi–evergreen forest	6,132,647	0.25			*			Mozambique, Tanzania
8	Semi–evergreen forests	7,518,434	0.31			*			South Africa
9	Drier semi–evergreen rainforests	12,474,742	0.52			*			Guinea
10	Sudanian woodlands & evergreen forests	179,167,778	7.40				*		–
11	Sudanian woodlands, forests & savanna	3,431,362	0.14					*	Uganda
12	Dry deciduous forests	17,533,675	0.72			*			Madagascar
13	Miombo and dry evergreen forests	198,545,722	8.20					*	Zambia
14	Deciduous woodlands	24,304,341	1.00				*		South Africa
15	Deciduous forests	18,874,662	0.78			*			Mozambique, Tanzania
16	Woodlands and savanna	128,905,602	5.32					*	Sudan
17	Evergreen forests & grass savanna	1,782,556	0.07		*				Ghana
18	Wooded grassland with baobabs	3,326,893	0.14	*					Angola
19	Miombo, mopane, drier deciduous forest	174,382,933	7.20					*	–
20	Very dry savanna & steppe	128,666,530	5.31			*			Sudan
21	Dry savanna, steppe & thickets	64,087,299	2.65					*	Ethiopia, Kenya
22	Dry deciduous forests & thickets	9,200,686	0.38			*			Madagascar
23	Stunted scrub woodland & thickets	81,319,969	3.36				*		Angola, Namibia
25	Mediterranean Zone	972,688	0.04					*	South Africa
27	Mediterranean Zone	3,445,999	0.14				*		South Africa
29	Mediterranean Zone	2,284,844	0.09					*	South Africa
30	Temperate Forests	668,718	0.03			*			South Africa
32	Tree & bush pseudo–steppe	144,852,232	5.98			*			Sudan
33	Tree & bush pseudo–steppe	60,607,876	2.50				*		Somalia, Kenya
34	Deciduous thickets, shrub pseudo–steppe	3,681,961	0.15		*				Madagascar
35	Tree & shrub pseudo–steppe	50,373,650	2.08				*		South Africa, Namibia, Botswana
37	Shrub pseudo–steppe & steppe	54,731,706	2.28		*				Somalia, Ethiopia
38	Shrub pseudo–steppe & steppe	65,436,529	2.70					*	Namibia, South Africa
39	Transition forests	29,805,551	1.23			*			Uganda
40	Transition & montane evergreen forests	7,959,994	0.33			*			Cameroon
41	Transition forests	5,744,184	0.24			*			Madagascar
42	Transition forests & woodlands	28,085,362	1.16		*				Angola, Zaire
43	Transition woodlands & forests	24,804,242	1.02				*		Ethiopia
44	Transition woodlands, evergreen thicket	8,765,079	0.36					*	Ethiopia
45	Sclerophyllous montane and Tapia forests	13,244,282	0.55		*				Madagascar
49	Transition forests	6,761,158	0.28			*			South Africa
50	Highveld grassland	15,345,187	0.63		*				South Africa
51	Scrub forests, evergreen thickets	7,872,175	0.33					*	Uganda
52	Evergreen shrubland & thickets	11,092,329	0.46					*	Kenya
53	Evergreen shrub & thickets, montane forests	96,349	0.00			*			Kenya
54	Evergreen shrubs/thickets, Juniperus forests	2,142,400	0.09					*	Somalia, Kenya
56	Montane evergreen forests	34,665,539	1.43					*	Ethiopia
57	Montane evergreen bushlands & thickets	575,088	0.02				*		Madagascar
58	Montane evergreen forests	2,718,707	0.11				*		South Africa
61	Juniperus forests	6,925,812	0.29			*			Ethiopia
62	Montane evergreen scrubs	4,786,751	0.20		*				South Africa
64	Alpine scrub	2,946,725	0.12					*	Ethiopia
65	Alpine scrub	798,445	0.03				*		South Africa

*EFZs 36, 47 & 60 are omitted as they extend outside the region

Table 5 Distribution of ecofloristic zones in tropical African countries

Country	EFZ code	EFZ short description	% total EFZ in country			EFZ in country	
			100%	50–99%	25–49%	Area (ha)	Area protected (ha)
Angola	18	Wooded grassland with baobabs		•		2,804,704	0
	42	Transition forests and woodlands		•		16,654,658	10,469
Benin	–						
Botswana	23	Stunted scrub woodland and thickets			•	31,600,956	4,998,900
	35	Tree and shrub pseudo–steppe			•	14,691,760	3,241,025
Burkina Faso	–						
Burundi	–						
Cameroon	40	Transition and montane evergreen forests		•		5,978,878	21,250
Central African Republic	–						
Chad	–						
Congo	–						
Cote d'Ivoire	–						
Djibouti	–						
Equatorial Guinea	–						
Eritrea	–						
Ethiopia	21	Dry savanna steppe and thickets			•	17,573,240	8,696,262
	37	Shrub pseudo–steppe and steppe			•	21,359,889	512,119
	43	Transition woodlands and forests		•		18,246,268	600,369
	44	Transition woodlands, evergreen thickets		•		8,301,709	1,663,272
	56	Montane evergreen forests			•	16,005,513	1,822,823
	61	Juniperus forests		•		6,199,247	136,695
	64	Alpine scrub		•		2,501,989	966,372
Gabon	–						
Gambia	–						
Ghana	17	Dry evergreen forests, grass savannas		•		1,169,916	2,366
Guinea	9	Drier semi–evergreen rain forests		•		8,526,231	323,017
Guinea–Bissau	–						
Kenya	21	Dry savanna steppe and thickets			•	16,198,157	3,615,005
	33	Tree and bush pseudo–steppe			•	27,216,739	1,574,785
	52	Evergreen shrubland and thickets			•	4,793,927	388,133
	53	Evergreen shrub and thickets, montane forests	•			96,349	1,020
	54	Evergreen shrubs/thickets, Juniperus forests			•	649,114	202,573
Liberia	–						
Madagascar	2	Lowland rain forest	•			18,273	0
	3	Lowland rain forest	•			9,000,190	221,874
	6	Lowland rain forest	•			319,369	1,108
	12	Dry deciduous forests	•			17,533,675	419,537
	22	Dry deciduous forests and thickets	•			9,200,686	103,386
	34	Deciduous thickets, shrub pseudo–steppe	•			3,681,961	15,802
	41	Transition forests	•			5,744,184	199,266
	45	Sclerophyllous montane and Tapia forests	•			13,244,282	128,601
	57	Montane evergreen bushlands and thickets	•			575,088	32,944
Malawi	–						
Mali	–						
Mauritania	–						
Mozambique	7	Lowland semi–evergreen forest		•		3,717,108	0
	15	Deciduous forests		•		12,621,370	847
Namibia	23	Stunted scrub woodland and thickets			•	20,366,571	781,991
	35	Tree and shrub pseudo–steppe			•	15,318,262	301,989
	38	Shrub pseudo–steppe and steppe		•		34,884,574	7,540,983
Niger	–						
Nigeria	–						
Rwanda	–						
Senegal	–						
Sierra Leone	4	Swamp forests and mangrove			•	3,106,162	17,909
Somalia	33	Tree and bush pseudo–steppe			•	20,372,404	179,059
	37	Shrub pseudo–steppe and steppe		•		27,924,229	0
	54	Evergreen shrubs/thickets, Juniperus forests			•	682,539	0
South Africa	8	Semi–evergreen forests	•			7,518,434	270,276
	14	Deciduous woodlands		•		18,756,683	2,023,418
	25	Mediterranean zone	•			972,688	217,735
	27	Mediterranean zone	•			3,445,999	282,285
	29	Mediterranean zone	•			2,284,844	248,472
	30	Temperate forests	•			668,718	27,902
	35	Tree and shrub pseudo–steppe			•	18,001,141	486,359
	38	Shrub pseudo–steppe and steppe			•	25,585,264	887,545
	49	Transition forests	•			6,761,158	99,932
	50	Highveld grassland	•			15,345,187	119,052
	58	Montane evergreen forests	•			2,718,707	269,886
	62	Montane evergreen scrubs	•			4,766,751	19,087
	65	Alpine scrub	•			758,445	73,697
Sudan	16	Woodlands and savanna			•	46,436,970	6,601,668
	20	Very dry savanna and steppe			•	42,470,622	692,321
	32	Tree and bush pseudo–steppe			•	41,100,955	0
Tanzania	7	Lowland semi–evergreen forest			•	1,601,867	20,957
	15	Deciduous forests			•	4,934,963	716,884
Togo	–						
Uganda	11	Sudanian woodlands, forests and savanna		•		3,130,556	808,981
	39	Transition forests			•	12,269,961	370,312
	51	Scrub forests, evergreen thickets			•	2,287,057	495,373
Zaire	1	Lowland rain forest		•		82,037,765	4,837,019
	5	Dry evergreen rain forest			•	92,410,487	6,119,603
	42	Transition forests and woodlands			•	10,753,694	0
Zambia	13	Miombo and dry evergreen forests			•	50,436,682	11,455,678
Zimbabwe	–						

Table 6 Protection of moist forests in tropical Africa

Forest code	Forest description	Forest area (ha)	% forest area protected					Countries with >25% of forest
			0%	<1%	1–5%	5.1–10%	>10%	
111	Mangrove	3,424,166			*			Nigeria
113	Inland swamp	19,899,368			*			Zaire, Congo
121	Montane rain forest	15,973,866					*	Zaire, Ethiopia
122	Lowland rain forest	169,313,505				*		Zaire
130	Degraded rain forest	9,468,922			*			Zaire

Table 7 Distribution of moist forests in tropical African countries

Country	Forest code	Forest description	% total forest type in country			Moist forest in country	
			50–100%	25–49%	10–24%	Area (ha)	Area protected (ha)
Benin	–						
Burundi	–						
Cameroon	–						
Central African Republic	–						
Chad	–						
Congo	113	Inland swamp		*		6,252,100	0
	122	Lowland rainforest			*	17,223,050	660,459
Cote d'Ivoire	–						
Equatorial Guinea	–						
Eritrea	–						
Ethiopia	121	Montane rainforest		*		4,636,303	1,246,271
Gabon	111	Mangrove			*	619,662	36,004
	122	Lowland rainforest			*	22,488,644	1,365,405
Gambia	–						
Ghana	–						
Guinea	–						
Guinea–Bissau	–						
Kenya	121	Montane rainforest			*	1,656,072	912,522
Liberia	–						
Madagascar	121	Montane rainforest			*	2,296,034	144,865
Mozambique	–						
Niger	–						
Nigeria	111	Mangrove		*		1,046,432	2,526
Rwanda	–						
Sao Tome and Principe	–						
Senegal	–						
Sierra Leone	–						
Tanzania	–						
Togo	–						
Uganda	–						
Zaire	113	Inland swamp	*			12,473,943	216,021
	121	Montane rainforest		*		5,948,749	468,494
	122	Lowland rainforest	*			91,973,021	6,278,461
	130	Degraded rainforest	*			8,652,320	143,694
Zambia	–						

Table 8 Number of ecofloristic zones within South and South–East Asian countries

Country	ISO code	Area sq. km	% total area	No. EFZs
Bangladesh	BGD	144,000	2.24	3
Bhutan	BTN	46,620	0.72	4
Cambodia	KHM	181,000	2.81	6
India	IND	3,166,830	49.18	26
Lao People's Dem. Rep.	LAO	236,725	3.68	5
Malaysia (West)	MYS	131,598	2.04	3
Myanmar	MMR	678,030	10.53	10
Nepal	NPL	141,415	2.20	12
Pakistan	PAK	803,940	12.48	12
Sri Lanka	LKA	65,610	1.02	5
Thailand	THA	514,000	7.98	6
Viet Nam	VNM	329,565	5.12	8
Regional Totals		6,439,333	100.00	39

Table 9 Conservation status of ecofloristic zones in South and South–East Asia

EFZ code	EFZ short description	EFZ area (ha)	EFZ area % region	% total EFZ protected					Countries with >25% of EFZ
				0%	<1%	1–5%	5.1–10%	>10%	
3	Lowland evergreen forest	15,087,612	2.35			*			Malaysia
4	Lowland evergreen forest	2,518,312	0.39			*			Viet Nam, Myanmar
5	Lowland evergreen forest	63,341,368	9.88				*		Myanmar
6	Lowland evergreen forest	3,125,774	0.49				*		Sri Lanka, India
7	Lowland deciduous forest	948,233	0.15		*				Viet Nam
8	Lowland deciduous forest	57,591,171	8.98			*			India
9	Lowland deciduous forest	57,128,147	8.91		*				India
10	Montane temperate forest	1,597,043	0.25			*			India, Viet Nam
11	Montane and sub–alpine forest	4,216,786	0.66				*		Myanmar, Bhutan
12	Himalayan moist temperate forest	245,467	0.04		*				India, Nepal
13	Temperate and sub–alpine forest	6,359,480	0.99				*		India
14	Evergreen & semi–evergreen forest	119,088	0.02	*					Viet Nam
15	Evergreen & deciduous forest	5,022,029	0.78			*			India
16	Deciduous & mixed forest	42,605,122	6.65				*		Thailand, Cambodia
17	Deciduous & mixed forest	5,943,056	0.93		*				Myanmar
18	Dry deciduous forest	82,358,558	12.85			*			India
19	Dry evergreen forest	7,017,163	1.09				*		India, Sri Lanka
20	Dry evergreen forest	1,462,523	0.23			*			India, Pakistan
21	Pseudo–steppe	18,563,186	2.90		*				Pakistan
22	Thorn forest & pseudo–steppe	43,011,958	6.71			*			Pakistan, India
23	Himalayan dry temperate forest	3,193,663	0.50			*			Pakistan
24	Semi–deciduous & mixed forest	67,950,180	10.60				*		Myanmar
25	Deciduous forest	6,337,200	0.99			*			India
26	Semi–evergreen and deciduous forest	390,536	0.06		*				India
27	Moist deciduous forest	3,529,288	0.55			*			India
28	Deciduous forest	40,822,782	6.37					*	India
29	Deciduous & mixed forest	277,874	0.04	*					Cambodia
30	Pseudo–steppe	31,811,207	4.96		*				Pakistan
31	Temperate & alpine forest and scrub	375,026	0.06	*					Pakistan
32	Dipterocarp and oak forest	34,107	0.01					*	Malaysia
33	Montane forest	558,642	0.09					*	Malaysia
34	Lower montane and evergreen hill forest	24,182,251	3.77				*		Myanmar, Lao PDR
35	Montane and temperate mixed forest	8,234,444	1.28			*			India, Myanmar
36	Sub–tropical hill forest	16,043	0.00	*					Sri Lanka
37	Hill & montane forest	594,117	0.09			*			India, Sri Lanka
38	Sub–tropical pine forests	4,937,939	0.77			*			India
39	Sub–tropical pine and temperate forest	749,721	0.12					*	Nepal
40	Alpine scrub	2,295,183	0.36					*	Bhutan, Nepal
41	Alpine steppe, dwarf juniper scrub	26,535,520	4.14			*			India, Pakistan

Table 10 Distribution of ecofloristic zones in South and South–East Asian countries

Country	EFZ code	EFZ short description	% total EFZ in country			EFZ in country	
			100%	50–99%	25–49%	Area (ha)	Area protected (ha)
Bangladesh	–						
Bhutan	11	Montane & sub–alpine forest			*	1,634,137	308,964
	40	Alpine scrub			*	1,062,702	525,266
Cambodia	16	Deciduous & mixed forest			*	11,052,889	1,659,095
	29	Deciduous & mixed forest	*			277,874	0
India	6	Lowland evergreen forest			*	1,290,954	42,938
	8	Lowland deciduous forest	*			57,591,171	923,930
	9	Lowland deciduous forest		*		52,296,716	508,872
	10	Montane temperate forest			*	709,838	0
	12	Himalayan moist temperate forest		*		181,252	726
	13	Temperate & sub–alpine forest		*		3,807,239	105,237
	15	Evergreen & deciduous forest	*			5,022,029	69,705
	18	Dry deciduous forest		*		82,222,676	2,112,328
	19	Dry evergreen forest		*		4,907,115	61,252
	20	Dry evergreen forest		*		781,244	2,467
	22	Thorn forest & pseudo–steppe			*	20,144,709	391,174
	25	Deciduous forest		*		5,954,135	107,609
	26	Semi–evergreen & deciduous forest	*			390,536	1,037
	27	Moist deciduous forest	*			3,529,288	109,049
	28	Deciduous forest		*		26,738,838	443,868
	35	Montane & temperate mixed forest			*	2,443,973	65,117
	37	Hill & montane forest		*		368,918	8,023
	38	Sub tropical pine forest		*		3,209,742	39,242
	41	Alpine steppe, dwarf juniper scrub		*		14,380,132	102,431
Lao PDR	34	Lower montane & evergreen hill forest			*	6,332,864	536,220
Malaysia	3	Lowland evergreen forest		*		12,644,419	472,059
	32	Dipterocarp & oak forest	*			34,107	17,353
	33	Montane forest	*			558,642	56,526
Myanmar	4	Lowland evergreen forest			*	964,268	273
	5	Lowland evergreen forest			*	21,839,575	4,504
	11	Montane & sub–alpine forest			*	1,579,244	0
	17	Deciduous & mixed forest	*			5,943,056	26,291
	24	Semi–deciduous & mixed forest			*	25,900,018	138,321
	34	Lower montane & evergreen hill forest			*	10,443,654	0
	35	Montane & temperate mixed forest			*	3,360,063	0
Nepal	12	Himalayan moist temperate forest			*	64,215	0
	39	Sub–tropical pine & temperate forest		*		578,507	22,763
	40	Alpine scrub			*	769,236	359,762
Pakistan	20	Dry evergreen forest			*	681,279	16,415
	21	Pseudo–steppe	*			18,563,186	21,538
	22	Thorn forest & pseudo–steppe		*		22,867,249	652,060
	23	Himalayan dry temperate forest		*		3,187,659	58,805
	30	Pseudo–steppe		*		26,191,254	7,257
	31	Temperate & alpine forest and scrub	*			375,026	0
	41	Alpine steppe, dwarf juniper scrub			*	23,082,017	214,751
Sri Lanka	6	Lowland evergreen forest		*		1,834,820	165,470
	19	Dry evergreen forest			*	2,110,048	372,370
	36	Sub–tropical hill forest	*			16,043	0
	37	Hill & montane forest			*	225,199	15,684
Thailand	16	Deciduous & mixed forest		*		24,366,044	1,298,392
Viet Nam	4	Lowland evergreen forest			*	1,156,907	14,287
	7	Lowland deciduous forest	*			948,233	2,256
	10	Montane temperate forest			*	507,274	67,267
	14	Evergreen & semi–evergreen forest	*			119,088	0

Table 11 Protection of moist forests in South and South–East Asia

Forest code	Forest description	Forest area (ha)	% forest area protected					Countries with >25% of forest
			0%	<1%	1–5%	5.1–10%	>10%	
111	Mangrove	1,367,859			*			Thailand, Bangladesh
112	Degraded mangrove	299,876	*					Myanmar
113	Inland swamp	1,203,294					*	Cambodia, Malaysia
114	Degraded inland swamp	17,483	*					Myanmar
121	Montane rain forest	11,099,397				*		Myanmar
122	Lowland rain forest	40,992,361					*	Myanmar
130	Degraded rain forest	7,539,620			*			Lao PDR
210	Montane monsoon forest	2,000,845					*	India
220	Lowland monsoon forest	33,250,902				*		India
230	Degraded monsoon forest	3,619,386		*				Myanmar

Table 12 Distribution of moist forests in South and South–East Asian countries

Country	Forest code	Forest description	% total forest type in country			Moist forest in country	
			50–100%	25–49%	10–24%	Area (ha)	Area protected (ha)
Bangladesh	111	Mangrove		*		415,629	13,087
Bhutan	–						
Cambodia	113	Inland swamp	*			785,828	269,888
	122	Lowland rainforest			*	5,605,968	1,596,796
	220	Lowland monsoon forest			*	4,780,972	842,836
India	210	Montane monsoon forest		*		805,826	38,048
	220	Lowland monsoon forest		*		13,074,727	560,320
Lao PDR	121	Montane rainforest			*	1,171,286	51,555
	130	Degraded rainforest	*			5,817,278	333,560
	210	Montane monsoon forest			*	375,908	51,971
Malaysia (West)	113	Inland swamp		*		406,446	1,217
	122	Lowland rainforest			*	5,735,620	429,545
Myanmar	112	Degraded mangrove	*			299,876	0
	114	Degraded inland swamp	*			17,483	0
	121	Montane rainforest	*			5,839,869	0
	122	Lowland rainforest		*		14,612,092	72
	130	Degraded rainforest			*	1,701,707	0
	210	Montane monsoon forest			*	446,158	0
	220	Lowland monsoon forest			*	5,416,857	122,019
	230	Degraded monsoon forest	*			3,619,386	11,428
Nepal	–						
Pakistan	–						
Sri Lanka	–						
Thailand	111	Mangrove		*		573,833	15,111
	121	Montane rainforest			*	1,466,285	490,089
	122	Lowland rainforest			*	5,520,772	2,206,834
	210	Montane monsoon forest			*	202,361	124,647
Viet Nam	111	Mangrove			*	164,786	0

Table 13 Number of ecofloristic zones within Insular South–East Asian countries

Country	ISO code	Area sq. km	% total area	No. EFZs
Brunei Darussalam	BRN	5,765	0.20	1
Indonesia	IDN	1,919,445	65.82	17
Malaysia (East)	MYS	198,159	6.80	3
Papua New Guinea	PNG	462,840	15.87	6
Philippines	PHL	300,000	10.29	5
Solomon Islands	SLB	29,790	1.02	–
Regional Totals		2,915,999	100.00	17

Table 14 Conservation status of ecofloristic zones in Insular South–East Asia

EFZ code	EFZ short description	EFZ area (ha)	EFZ area % region	% total EFZ protected					Countries with >25% of EFZ
				0%	<1%	1–5%	5.1–10%	>10%	
1	Evergreen forest, <300m	87,444,636	33.98					*	Indonesia
2	Evergreen forests, <1000m	47,440,116	18.43				*		Indonesia
3	Evergreen forest, <500m	4,033,063	1.57					*	Indonesia
4	Evergreen forest, <1400m	80,967,748	31.46			*			Indonsia, PNG
5	Evergreen forest, 300–1000m	5,976,478	2.32					*	Philippines
6	Evergreen forest, 500–1400m	183,752	0.07			*			Indonesia
7	Moist semi–deciduous forest	5,545,785	2.15				*		Philippines
8	Very moist semi–deciduous forest	14,587,303	5.67				*		Indonesia
9	Deciduous forest	6,065,985	2.36				*		Philippines
10	Deciduous forest	3,597,511	1.40				*		Indonesia
11	Deciduous forest	1,506,645	0.59					*	PNG
12	Deciduous forest, sclerophyllous thickets	1,046,880	0.41		*				Indonesia
13	Tropical montane forest, 1400–2400m	9,966,482	3.87					*	Indonesia
14	Tropical montane forest, 1400–2400m	11,172,558	4.34				*		Indonesia, PNG
15	Tropical montane thickets, 2400–4000m	632,351	0.25					*	Indonesia
16	Tropical montane thickets, 2400–4000m	5,696,413	2.21					*	Indonesia, PNG
17	Alpine grasslands and scrub, 4000–4500m	459,910	0.18					*	PNG

Table 15 Distribution of ecofloristic zones in Insular South–East Asian countries

Country	EFZ code	EFZ short description	% total EFZ in country			EFZ in country	
			100%	50–99%	25–49%	Area (ha)	Area protected (ha)
Brunei Darussalam	–						
Indonesia	1	Evergreen forest <300m		*		56,624,734	3,354,763
	2	Evergreen forest <1000m	*			47,440,116	3,131,028
	3	Evergreen forest, <500m	*			4,033,063	429,710
	4	Evergreen forest <1400m		*		46,585,587	2,418,678
	6	Evergreen forest, 500–1400m	*			183,752	8,000
	8	Very moist semi–deciduous forest		*		11,975,755	1,209,989
	10	Deciduous forest	*			3,597,511	195,512
	12	Deciduous forest, sclerophyllous thickets	*			1,046,880	6,298
	13	Tropical montane forest, 1400–2400m		*		6,925,706	1,753,064
	14	Tropical montane forest, 1400–2400m		*		6,214,202	788,839
	15	Tropical montane thickets, 2400–4000m		*		503,419	195,106
	16	Tropical montane thickets, 2400–4000m		*		3,640,971	687,458
Malaysia (East)	–						
Papua New Guinea	4	Evergreen forest <1400m			*	34,381,314	77,212
	11	Deciduous forest		*		1,224,219	338,639
	14	Tropical montane forest, 1400–2400m			*	4,958,356	10,182
	16	Tropical montane thickets, 2400–4000m			*	2,055,442	224
	17	Alpine grasslands & scrub, 4000–4500m		*		344,994	0
Philippines	5	Evergreen forest, 300–1000m		*		5,468,690	871,551
	7	Moist semi–deciduous forest		*		4,564,061	314,065
	9	Deciduous forest		*		5,897,412	520,603

Table 16 Protection of moist forests in Insular South–East Asia

Forest code	Forest description	Forest area (ha)	% forest area protected					Countries with >25% of forest
			0%	<1%	1–5%	5.1–10%	>10%	
111	Mangrove	5,614,127					*	Indonesia
113	Inland swamp	26,641,680				*		Indonesia
121	Montane rain forest	23,935,185					*	Indonesia, PNG
122	Lowland rain forest	119,848,194				*		Indonesia
130	Degraded rain forest	2,238,717					*	Philippines
210	Montane monsoon forest	525,411					*	Philippines
220	Lowland monsoon forest	3,553,017				*		Indonesia
230	Degraded monsoon forest	502,368					*	Philippines

Table 17 Distribution of moist forests in Insular South–East Asian countries

Country	Forest code	Forest description	% total forest type in country			Moist forest in country	
			50–100%	25–49%	10–24%	Area (ha)	Area protected (ha)
Brunel Darussalam	–						
Indonesia	111	Mangrove	*			4,413,652	454,298
	113	Inland swamp	*			17,982,310	944,152
	121	Montane rainforest	*			14,139,136	3,591,605
	122	Lowland rainforest	*			78,299,841	6,176,884
	210	Montane monsoon forest			*	120,284	38,083
	220	Lowland monsoon forest	*			2,930,342	164,578
Malaysia (East)	111	Mangrove			*	641,665	157,197
	121	Montane rainforest			*	2,696,524	1,112,297
	122	Lowland rainforest			*	14,691,795	4,606,908
Papua New Guinea	113	Inland swamp			*	6,635,854	4,580
	121	Montane rainforest		*		6,467,010	1,360
	122	Lowland rainforest			*	22,977,488	56,683
Philippines	130	Degraded rainforest	*			2,238,717	341,903
	210	Montane monsoon forest	*			405,127	244,802
	230	Degraded monsoon forest	*			502,368	82,791
Solomon Islands	–						

Table 18 Number of ecofloristic zones within tropical South American countries

Country	ISO code	Area sq. km	% total area	No. EFZs
Bolivia	BOL	1,098,575	7.69	14
Brazil	BRA	8,511,965	59.59	18
Colombia	COL	1,138,915	7.97	17
Ecuador	ECU	461,475	3.23	13
French Guiana	GUF	91,000	0.64	3
Guyana	GUY	214,970	1.50	5
Paraguay	PRY	406,750	2.85	5
Peru	PER	1,285,215	9.00	16
Suriname	SUR	163,820	1.15	3
Venezuela	VEN	912,045	6.38	16
Regional Totals		14,284,730	100.00	31

Table 19 Conservation status of ecofloristic zones in tropical South America

EFZ code	EFZ short description	EFZ area (ha)	EFZ area % region	% total EFZ protected					Countries with >25% of EFZ
				0%	<1%	1–5%	5.1–10%	>10%	
1	Foret ombrophile, 0 mois secs	171,369,381	12.19					*	Brazil
2	Foret ombrophile, 1–3 mois secs	304,926,135	21.70					*	Brazil
3	Foret sempervirente, 0–4 mois secs	169,601	0.01					*	Columbia, Venezuela
4	Foret sempervirente saisonniere, 2–4 mois secs	161,253,017	11.47					*	Brazil
5	Foret sempervirente, 0–4 mois secs	26,260,263	1.87			*			Brazil
6	Foret sempervirente, 0 mois secs	3,805,597	0.27		*				Paraguay, Brazil
7	Forets decidues et prairie	602,617	0.04			*			Ecuador, Peru
8	Cerrados	406,981	0.03	*					Brazil
9	Foret decidue	24,094,935	1.71				*		Bolivia, Colombia
10	Foret xeromorphe et llanos	194,118,174	13.81				*		Brazil
11	Pantanal	14,803,526	1.05			*			Brazil
12	Foret sempervirente	19,436,976	1.38			*			Paraguay
13	Foret decidue, Caatinga	3,775,015	0.27					*	Ecuador, Venezuela
14	Caatinga	84,488,856	6.01		*				Brazil
15	Foret claire decidue	4,870,213	0.35					*	Venezuela, Colombia
16	Foret claire decidue	34,247,041	2.44			*			Paraguay, Bolivia
17	Foret xeromorphe, 8–9 mois secs	9,504,726	0.68					*	Peru
18	Zone desertique, 10–12 mois secs	5,533,557	0.39		*				Peru
19	Cerrados, fraiche	147,373,879	10.49		*				Brazil
20	Foret sempervirente, regime axenique	46,353,268	3.30		*				Brazil
29	Foret tropicale submontagnarde ombrophile	30,511,941	2.17					*	Venezuela
30	Foret sempervirente avec une saison fraiche	15,219,802	1.08				*		Colombia, Ecuador
31	Foret tropicale submontagnarde ombrophile	1,503,838	0.11				*		Bolivia, Brazil
32	Foret dense sempervirente	659,452	0.05					*	Brazil
33	Foret sempervirente saisonniere	7,197,810	0.51					*	Peru
34	Foret decidue et submontagnarde	4,706,520	0.33				*		Peru
35	Foret tropicale montagnarde ombrophile	10,791,948	0.77					*	Colombia, Peru
36	Foret ombrophile de brouillard	4,218,632	0.30					*	Colombia
37	Foret sempervirente montagnarde	6,814,592	0.48					*	Ecuador, Peru
38	Foret de montagne decidue	20,329,082	1.45			*			Peru
39	Communaute herbacee cespiteuse, andine	45,980,814	3.27				*		Bolivia, Peru

Table 20 Distribution of ecofloristic zones in tropical South American countries

Country	EFZ code	EFZ short description	% total EFZ in country			EFZ in country	
			100%	50–99%	25–49%	Area (ha)	Area protected (ha)
Bolivia	9	Foret decidue		*		15,763,524	1,779,125
	16	Foret claire decidue			*	15,982,103	27,497
	31	Foret tropicale submontagnarde ombrophile		*		823,993	108,477
	39	Communaute herbacee cespiteuse andine		*		23,707,457	2,227,836
Brazil	1	Foret ombrophile, 0 mois secs		*		93,872,369	23,760,888
	2	Foret ombrophile, 1–3 mois secs		*		211,808,762	28,177,315
	4	Foret sempervirente, 2–4 mois secs		*		90,107,742	11,048,526
	5	Foret sempervirente, 0–4 mois secs	*			26,260,263	318,918
	6	Foret sempervirente, 0 mois secs			*	1,878,735	0
	8	Cerrados	*			406,981	0
	10	Foret xeromorphe, llanos		*		131,342,065	10,949,706
	11	Pantanal		*		13,366,178	147,322
	14	Caatinga	*			84,488,856	326,639
	19	Cerrados, fraiche		*		146,928,813	1,088,563
	20	Foret sempervirente, regime axenique	*			46,353,268	370,713
	31	Foret tropicale submontagnarde ombrophile			*	679,845	12,749
	32	Foret dense sempervirente	*			659,452	118,298
Colombia	3	Foret sempervirente, 0–4 mois secs		*		125,137	9,301
	9	Foret decidue			*	7,677,879	130,631
	15	Foret claire decidue			*	1,370,577	81,938
	30	Foret sempervirente avec une saison fraiche			*	4,601,084	213,933
	35	Foret tropicale montagnarde ombrophile			*	4,278,401	386,167
	36	Foret ombrophile de brouillard		*		3,517,608	551,495
Ecuador	7	Forets decidues et prairie		*		307,378	17,298
	13	Foret decidue, Caatinga			*	1,482,557	0
	30	Foret sempervirente avec une saison fraiche			*	4,068,843	195,510
	37	Foret sempervirente montagnarde			*	2,928,109	489,769
French Guiana	–						
Guyana	–						
Paraguay	6	Foret sempervirente, 0 mois secs		*		1,926,862	33,787
	12	Foret sempervirente		*		19,383,934	374,448
	16	Foret claire decidue		*		18,078,564	895,708
Peru	7	Forets decidues et prairie		*		295,239	0
	17	Foret xeromorphe, 8–9 mois secs		*		7,124,917	54,519
	18	Zone desertique, 10–12 mois secs	*			5,533,557	6,976
	33	Foret sempervirente saisonniere		*		6,344,865	1,111,482
	34	Foret decidue et submontagnarde		*		3,268,113	0
	35	Foret tropicale montagnarde ombrophile			*	3,271,600	696,300
	37	Foret sempervirente montagnarde			*	2,412,410	36,434
	38	Foret de montagne decidue		*		14,559,896	437,315
	39	Communaute herbacee cespiteuse andine			*	18,087,942	363,767
Suriname	–						
Venezuela	3	Foret sempervirente, 0–4 mois secs			*	44,464	44,464
	13	Foret decidue, Caatinga			*	1,226,747	336,922
	15	Foret claire decidue		*		3,499,636	463,062
	29	Foret tropicale submontagnarde ombrophile			*	11,425,358	3,701,466

Table 21 Protection of moist forests in tropical South America

Forest code	Forest description	Forest area (ha)	% forest area protected					Countries with >25% of forest
			0%	<1%	1–5%	5.1–10%	>10%	
111	Mangrove	3,139,552					*	Brazil
113	Inland swamp	9,941,088				*		Peru
121	Montane rain forest	26,809,277					*	Peru, Bolivia
122	Lowland rain forest	535,614,909					*	Brazil
123	Sub–montane rain forest	36,257,263					*	Venezuela, Peru
130	Degraded rain forest	1,231,597		*				Paraguay
500	Dry forest	16,289,481				*		Brazil
510	Pine forest	2,545,728			*			Brazil

Table 22 Distribution of moist forests in South American countries

Country	Forest code	Forest description	% total forest type in country			Moist forest in country	
			50–100%	25–49%	10–24%	Area (ha)	Area protected (ha)
Bolivia	121	Montane rainforest		*		6,924,796	1,158,275
	123	Sub–montane rainforest			*	6,116,494	1,143,992
Brazil	111	Mangrove	*			1,637,132	160,253
	121	Montane rainforest			*	6,034,532	2,880,420
	122	Lowland rainforest	*			320,297,277	54,437,051
	500	Dry Forest	*			10,950,581	487,214
	510	Pine Forest	*			2,545,728	53,840
Colombia	111	Mangrove			*	367,982	82,325
	121	Montane rainforest			*	3,149,043	782,468
Ecuador	–						
French Guiana	–						
Guyana	–						
Paraguay	130	Degraded rainforest	*			1,182,698	12,441
Peru	113	Inland Swamp	*			5,753,283	29,922
	121	Montane rainforest		*		7,418,765	539,719
	122	Lowland rainforest			*	54,530,184	1,430,160
	123	Sub–montane rainforest		*		12,659,835	1,733,818
Suriname	113	Inland Swamp			*	1,301,428	74,716
Venezuela	111	Mangrove			*	595083	190747
	113	Inland Swamp			*	2,254,261	689,454
	123	Sub–montane rainforest		*		13,961,194	5,734,688
	500	Dry Forest			*	2,926,856	531,690

Table 23 Number of major zones within Central America and Caribbean countries

Country	ISO code	Area sq. km	% total area	No. MZs
Antigua and Barbuda	ATG	442	0.02	1
Bahamas	BHS	13,865	0.50	5
Barbados	BRB	430	0.02	1
Belize	BLZ	22,965	0.84	3
Cayman Islands	CYM	259	0.01	1
Costa Rica	CRI	50,900	1.85	5
Cuba	CUB	114,525	4.17	5
Dominica	DMA	751	0.03	1
Dominican Republic	DOM	48,440	1.76	4
El Salvador	SLV	21,395	0.78	3
Grenada	GRD	345	0.01	1
Guadeloupe	GRD	1,780	0.06	1
Guatemala	GTM	108,890	3.96	6
Haiti	HTI	27,750	1.01	5
Honduras	HND	112,085	4.08	5
Jamaica	JAM	11,425	0.42	5
Martinique	MTQ	1,079	0.04	2
Mexico	MEX	1,967,183	71.58	9
Montserrat	MSR	104	0.00	2
Netherlands Antilles	ANT	800	0.03	1
Nicaragua	NIC	148,000	5.39	4
Panama	PAN	78,515	2.86	4
Puerto Rico	PRI	8,960	0.33	3
Saint Kitts and Nevis	KNA	261	0.01	1
Saint Lucia	LCA	619	0.02	1
Saint Vincent–Grenadines	VCT	389	0.01	2
Trinidad and Tobago	TTO	5,130	0.19	2
Turks and Caicos Islands	TCA	430	0.02	2
Virgin Islands (British)	VGB	130	0.00	2
Virgin Islands (U.S.)	VIR	345	0.01	1

Table 24 Conservation status of major ecofloristic zones in Central America and the Caribbean

Major Zone	Major Zone short description	Major Zone area (ha)	Major Zone area % region	% total Major Zone protected					Countries with >25% of Major Zone
				0%	<1%	1–5%	5.1–10%	>10%	
1	Lowland Wet	3,416,828	1.27					*	Nicaragua, Panama
2	Lowland Very Moist	26,901,859	10.02					*	(Nicaragua: 22%)
3	Lowland Moist with Short Dry Season	–							
4	Lowland Moist with Long Dry Season	48,871,225	18.21			*			Mexico
5	Lowland Sub–Dry	8,277,148	3.08		*				Mexico
6	Lowland Very Dry / Sub–Arid	4,271,243	1.59		*				Mexico
7	Lowland Arid / Desertic	15,344,747	5.72					*	Mexico
8	Premontane Moist	46,882,083	17.46				*		Mexico
9	Premontane Dry	111,131,443	41.40			*			Mexico
10	Montane Moist	1,251,437	0.47				*		Mexico
11	Montane Dry	2,097,450	0.78		*				Mexico
12	Alpine	–							

Table 25 Distribution of major ecofloristic zones in Central America and Caribbean countries

Country	Major Zone	Major Zone short description	% total Major Zone in country				Major Zone in country	
			100%	50–99%	25–49%	10–24%	Area (ha)	Area protected (ha)
Antigua and Barbuda	–							
Bahamas	–							
Barbados	–							
Belize	–							
Cayman Islands	–							
Costa Rica	1	Lowland Wet				*	846,633	63,928
Cuba	4	Lowland Moist with Long Dry Season				*	7,955,363	257,788
Dominica	–							
Dominican Republic	–							
El Salvador	–							
Grenada	–							
Guadeloupe	–							
Guatemala	2	Lowland Very Moist				*	3,581,998	481,032
	8	Premontane Moist				*	5,846,906	779,045
Haiti	–							
Honduras	2	Lowland Very Moist				*	3,090,951	246,015
	8	Premontane Moist				*	6,716,687	213,807
Jamaica	–							
Martinique	–							
Mexico	2	Lowland Very Moist				*	3,624,990	542,794
	4	Lowland Moist with Long Dry Season		*		*	33,203,725	678,035
	5	Lowland Sub–Dry		*			7,953,539	24,325
	6	Lowland Very Dry / Sub–Arid		*			4,242,290	12,235
	7	Lowland Arid / Desertic		*			15,284,027	2,143,246
	8	Premontane Moist			*		18,123,861	434,900
	9	Premontane Dry		*			109,746,687	1,027,090
	10	Montane Moist		*			1,161,782	79,858
	11	Montane Dry	*				2,097,450	3,648
Montserrat	–							
Netherlands Antilles	–							
Nicaragua	1	Lowland Wet			*		1,291,572	288,698
	2	Lowland Very Moist				*	6,039,739	1,278,087
Panama	1	Lowland Wet			*		1,039,853	233,980
	2	Lowland Very Moist				*	3,142,410	366,755
Puerto Rico	0							
Saint Kitts and Nevis	–							
Saint Lucia	–							
Saint Vincent–Grenadines	–							
Trinidad and Tobago	–							
Turks and Caicos Islands	–							
Virgin Islands (British)	–							
Virgin Islands (U.S.)	–							

Table 26 Protection of moist forests in Central America and the Caribbean

Forest code	Forest description	Forest area (ha)	% forest area protected					Countries with >25% of forest
			0%	<1%	1–5%	5.1–10%	>10%	
111	Mangrove	1,462,819					*	Cuba
112	Degraded mangrove	77,172					*	Nicaragua
113	Inland swamp	1,543,713					*	Nicaragua, Guatemala
120	Lowland/Montane rain forest	36,487					*	Martinique
121	Montane rain forest	3,725,477					*	Honduras, Guatemala
122	Lowland rain forest	27,276,032					*	Mexico
123	Sub–montane rain forest	1,031,806					*	Costa Rica, Jamaica
130	Degraded rain forest	19,253	*					Trinidad & Tobago
131	Degraded montane rain forest	296					*	Jamaica, Trin. & Toba.
133	Degraded sub–mon. rain forest	8,144					*	Jamaica
500	Dry forest	19,417,160		*				Mexico
510	Pine forest	38,833,428			*			Mexico

Table 27 Distribution of moist forests in Central America and Caribbean countries

Country	Forest code	Forest description	% total forest type in country			Moist forest in country	
			50–100%	25–49%	10–24%	Area (ha)	Area protected (ha)
Antigua and Barbuda	–						
Bahamas	–						
Barbados	–						
Belize	–						
Cayman Islands	–						
Costa Rica	–						
Cuba	111	Mangrove	*			766,380	43,743
	113	Inland swamp			*	358,859	17,380
	123	Sub–montane rainforest			*	251,251	63,529
Dominica	–						
Dominican Republic	–						
El Salvador	–						
Grenada	–						
Guadeloupe	–						
Guatemala	113	Inland swamp		*		556,352	163,160
	121	Montane rainforest		*		1,020,807	23,465
	122	Lowland rainforest			*	2,791,282	997,806
Haiti	–						
Honduras	111	Mangrove			*	231,091	83,217
	121	Montane rainforest		*		1,278,504	55,288
Jamaica	123	Sub–montane rainforest		*		266,333	50,746
	131	Degraded montane rainforest	*			194	144
	133	Degraded sub–mon. rainforest	*			8,144	1,693
Martinique	120	Lowland/montane rainforest	*			36,487	25,971
Mexico	121	Montane rainforest			*	560,162	18,172
	122	Lowland rainforest		*		13,343,490	1,097,874
	500	Dry forest	*			19,114,177	65,536
	510	Pine forest	*			34,039,389	595,357
Montserrat	–						
Netherlands Antilles	–						
Nicaragua	112	Degraded mangrove	*			77,172	44,547
	113	Inland swamp		*		556,370	108,104
	121	Montane rainforest			*	628,939	369,994
	122	Lowland rainforest			*	3,008,714	1,256,422
Panama	111	Mangrove			*	180,080	12,294
	122	Lowland rainforest			*	3,550,186	1,141,845
	123	Sub–montane rainforest			*	172,320	97,007
Puerto Rico	–						
Saint Kitts and Nevis	–						
Saint Lucia	–						
Saint Vincent–Grenadines	–						
Trinidad and Tobago	130	Degraded rainforest	*			19,253	0
Turks and Caicos Islands	–						
Virgin Islands (British)	–						
Virgin Islands (U.S.)	–						

Table 28 Protection of major ecofloristic zones in tropical regions

Major Zone		Africa*		South & South–East Asia		Insular South–East Asia		South America		Cen. America & Caribbean		Total	
Code	Description	Area (sq.km)	% Protected	Area (sq.km)	% Protected	Area (sq.km)	% Protected	Area (sq.km)	% Protected	Area (sq.km)	% Protected	Area (sq.km)	% Protected
1	Lowland Wet	105,557	2.68					1,713,694	23.09	34,168	17.17	1,853,419	21.82
2	Lowland Very Moist	1,142,721	5.61	892,142	4.94	2,260,458	8.01	3,049,261	11.79	269,019	14.65	7,613,601	9.04
3	L. Moist with Short Dry Season	2,839,606	4.37			201,331	8.64	1,914,885	11.13			4,955,822	7.16
4	L. Moist with Long Dry Season	4,111,533	9.86	1,193,079	4.09	96,635	7.41	2,534,632	7.29	488,712	3.30	8,424,591	7.86
5	Lowland Sub–Dry	3,607,777	12.09	2,535,915	2.97	25,535	17.01	1,273,811	1.73	82,771	0.29	7,525,809	7.15
6	Lowland Very Dry / Sub–Arid	5,335,895	7.73	430,120	2.43			95,047	11.92	42,712	0.29	5,903,774	7.35
7	Lowland Arid / Desertic	4,815,519	4.85	318,112	0.36			55,336	0.13	153,447	13.97	5,342,414	4.80
8	Premontane Moist	1,184,087	4.79	393,073	5.03	211,390	17.34	2,488,200	4.52	468,821	9.43	4,745,571	5.69
9	Premontane Dry	452,923	8.49	200,257	0.20			47,065	5.42	1,111,314	1.02	1,811,560	2.91
10	Montane Moist	448,851	10.68	124,188	6.65	63,288	15.13	218,252	16.63	12,514	7.12	867,093	11.88
11	Montane Dry	51,878	0.37	31,937	1.84			203,291	3.00	20,975	0.17	308,080	2.24
12	Alpine	37,052	36.64	288,307	7.26	4,599	14.56	459,808	7.71			789,766	8.94
	Total	24,133,398	7.61	6,407,128	3.58	2,863,236	8.97	14,053,282	9.82	2,684,455	5.20	50,141,499	7.66

* Excluding the Mediterranean Zone of southern Africa

Table 29 Protection ot moist forest types in tropical regions

Forest Type		Africa		South & South-East Asia		Insular South-East Asie		South America		Cen. America & Caribbean		Total	
Code	Description	Area (sq.km)	% Protected	Area (sq.km)	% Protected	Aree (sq.km)	% Protected	Area (sq.km)	% Protected	Area (sq.km)	% Protected	Area (sq.km)	% Protected
111	Mangrove	34,242	2.04	13,679	3.38	56,937	11.27	31,396	15.55	14,477	12.29	150,730	9.45
113	Inland Swamp	198,994	1.26	12,033	22.53	266,407	6.03	99,411	7.99	15,437	20.09	592,281	5.46
121	Montane rainforest	159,739	20.19	110,994	8.77	239,352	19.95	268,093	25.24	37,255	17.21	815,432	20.09
122	Lowland rainforest	1,693,135	6.89	409,924	12.86	1,201,108	9.27	5,356,149	14.37	272,760	20.52	8,933,077	12.39
123	Sub-montane rainforest							362,573	25.40	10,318	46.62	372,891	25.99
210	Montane monsoon forest			20,008	12.39	5,254	53.84					25,263	21.01
220	Lowland monsoon forest			332,509	8.50	35,530	8.63					368,039	8.52
500	Dry forest							162,895	7.01	194,172	0.66	357,066	3.56
510	Pine forest							25,457	2.11	388,334	2.07	413,792	2.07
	Total	2,086,109	7.29	899,147	10.72	1,804,589	10.39	6,305,973	15.13	932,753	8.72	12,026,571	12.24

Table 30 Government and donor assistance for protected areas in 25 countries prioritised by the British Government for aid under its Renewable Natural Resources Strategies

Country	Area sq. km	Indices of biodiversity				ODA for protected areas		National investment in protected areas*		
		Number of EFZs			National Biodiversity Index	Total committed US$	Allocated in 1992 US$/sq. km	PA budget in 1992 US$/sq. km	Staff in 1992 /1000 sq. km	PA coverage %
			>25% in Country	100% in Country						
Bangladesh	144,000	3	0	0	0.06	3,286,000	4180.66			0.09
Belize	22,965	3	?	?	0.07	0	0.00			28.85
Bolivia	1,098,575	14	4	0	0.22	13,785,857	16.93	4.05	0.64	11.26
Botswana	575,500	5	2	0	0.11	10,608,247	32.10			17.75
Brazil	8,511,965	18	13	5	0.86	29,291,959	11.59	0.65	0.47	9.13
Cameroon	475,500	8	1	0	0.19	1,653,285	19.73	24.77	4.38	4.55
Eritrea	93,679	8	0	0		0	0.00			6.32
Gambia	10,690	2	0	0	0.07	250,000	255.62	77.76		3.05
Ghana	238,305	3	1	0	0.12	8,910,000	115.58	70.56	53.59	6.47
Guyana	214,970	5	0	0	0.13	0	0.00			0.04
Honduras	112,085	5	?	?	0.08	0	0.00			5.36
India	3,166,830	26	19	4	0.33	0	0.00			1.69
Indonesia	1,919,445	17	12	5	0.63	27,069,244	176.07	13.58	9.43	7.47
Kenya	582,645	13	5	1	0.14	70,896,250	136.70			12.27
Malawi	94,080	3	0	0	0.08	1,310,000	17.13	63.47	74.74	16.25
Malaysia	329,758	6	3	2	0.2	0	0.00	55.33		23.70
Mexico	1,967,183	9	?	?	0.48	25,475,000	72.49			2.55
Namibia	824,295	4	3	0	0.09	120,000	0.55	147.25	5.01	13.20
Nepal	141,415	12	3	0	0.09	698,000	6.65	79.69	55.28	14.84
Nigeria	923,850	8	0	0	0.11	246,873	1.43	98.56		3.32
Pakistan	803,940	12	7	2	0.08	135,366	5.13	6.16	102.35	1.09
South Africa	1,184,825	16	13	10	0.46	0	0.00	597.68	130.04	4.93
Sri Lanka	65,610	5	4	1	0.08	4,100,000	66.73	156.05	39.15	13.01
Tanzania	939,760	10	2	0	0.19	0	0.00	6.7	12.1	15.11
Zimbabwe	390,310	4	0	0	0.1	566,000	2.26			12.81

* National investment in 1992 refers to expenditures by one or more government agency. It is expressed per sq. km of those protected areas managed by the agency or agencies.

Table 31 Breakdown of ODA commitments for protected areas in 1992

Type of assistance	Number	Amount (US$)
Grants	21	43,202,205
Matching grants	8	1,263,136
Concessionary loans	4	85,000,000
Unknown	15	68,936,740
Total	48	198,402,081

Table 32 Five highest recipients of ODA for protected areas, by value of all projects ongoing in 1992

Country	Amount (US$)	No. EFZs	NBI
Kenya	70,896,250	13	0.14
Brazil	29,291,959	18	0.86
Indonesia	27,069,244	17	0.63
Mexico	25,475,000	? 9	0.48
Bolivia	13,785,857	14	0.22

Table 33 Countries with high biodiversity and least ODA for protected areas, by value of all projects ongoing in 1992

Country	Amount (US$)	No. EFZs	NBI
South Africa	0	16	0.46
India	0	26	0.33
Malaysia	0	6	0.2
Tanzania	0	10	0.19
Pakistan	135,366	12	0.08

ANNEXES

Annex 1
ECOFLORISTIC ZONE PROTECTION IN TROPICAL COUNTRIES OF AFRICA

	EFZ area (ha)	EFZ area % total EFZ area	PAs I–III (ha)	PAs I–III % EFZ in country	PAs I–III % total EFZ	PAs I–VIII (ha)	PAs I–VIII % EFZ in country	PAs I–VIII % total EFZ
EFZ CODE 1								
Cameroon	11,758,309	11.21	0	0.00	0.00	900,494	7.66	0.86
Central African Republic	715,259	0.68	113,074	15.81	0.11	450,733	63.02	0.43
Congo	7,798,814	7.43	0	0.00	0.00	0	0.00	0.00
Equatorial Guinea	1,153,594	1.10	0	0.00	0.00	0	0.00	0.00
Gabon	1,470,529	1.40	0	0.00	0.00	0	0.00	0.00
Zaire	82,037,765	78.18	4,765,391	5.81	4.54	4,837,019	5.90	4.61
EFZ Total	104,934,270	100.00	4,878,465		4.65	6,188,246		5.90
EFZ CODE 2								
Madagascar	18,273	100.00	0	0.00	0.00	0	0.00	0.00
EFZ Total	18,273	100.00	0		0.00	0		0.00
EFZ CODE 3								
Madagascar	9,000,190	100.00	205,120	2.28	2.28	221,874	2.47	2.47
EFZ Total	9,000,190	100.00	205,120		2.28	221,874		2.47
EFZ CODE 4								
Cameroon	1,341,509	12.71	53,628	4.00	0.51	189,217	14.10	1.79
Guinea	1,282,351	12.15	0	0.00	0.00	30,800	2.40	0.29
Liberia	2,442,420	23.14	0	0.00	0.00	0	0.00	0.00
Nigeria	2,383,280	22.58	44,812	1.88	0.42	44,812	1.88	0.42
Sierra Leone	3,106,162	29.43	0	0.00	0.00	17,909	0.58	0.17
EFZ Total	10,555,722	100.00	98,440		0.93	282,738		2.68
EFZ CODE 5								
Angola	14,319,164	5.30	0	0.00	0.00	0	0.00	0.00
Benin	2,599,375	0.96	0	0.00	0.00	148,072	5.70	0.05
Cameroon	17,895,795	6.62	88,300	0.49	0.03	88,317	0.49	0.03
Central African Republic	18,856,250	6.98	0	0.00	0.00	6,299	0.03	0.00
Congo	26,531,177	9.82	131,689	0.50	0.05	1,118,102	4.21	0.41
Cote d'Ivoire	19,773,073	7.31	729,415	3.69	0.27	817,376	4.13	0.30
Equatorial Guinea	1,469,359	0.54	0	0.00	0.00	0	0.00	0.00
Gabon	25,074,884	9.28	9,986	0.04	0.00	1,875,160	7.48	0.69
Ghana	9,097,206	3.37	252,864	2.78	0.09	419,064	4.61	0.16
Guinea	5,709,173	2.11	92,595	1.62	0.03	331,477	5.81	0.12
Guinea–Bissau	197,332	0.07	0	0.00	0.00	0	0.00	0.00
Liberia	7,182,522	2.66	96,536	1 34	0.04	96,536	1.34	0.04
Nigeria	21,066,144	7.79	559,624	2.66	0.21	801,463	3.80	0.30

Annex 1
ECOFLORISTIC ZONE PROTECTION IN TROPICAL COUNTRIES OF AFRICA

	EFZ area (ha)	EFZ area % total EFZ area	PAs I–III (ha)	PAs I–III % EFZ in country	PAs I–III % total EFZ	PAs I–VIII (ha)	PAs I–VIII % EFZ in country	PAs I– VIII % total EFZ
Sierra Leone	3,448,200	1.28	0	0.00	0.00	147,975	4.29	0.05
Sudan	3,007,887	1.11	0	0.00	0.00	11,398	0.38	0.00
Togo	1,671,506	0.62	0	0.00	0.00	36,806	2.20	0.01
Zaire	92,410,487	34.19	1,667,876	1.80	0.62	6,119,603	6.62	2.26
EFZ Total	270,309,534	100.00	3,628,885		1.34	12,017,648		4.45
EFZ CODE 6								
Madagascar	319,369	100.00	1,108	0.35	0.35	1,108	0.35	0.35
EFZ Total	319,369	100.00	1,108		0.35	1,108		0.35
EFZ CODE 7								
Kenya	813,672	13.27	23,683	2.91	0.39	97,209	11.95	1.59
Mozambique	3,717,108	60.61	0	0.00	0.00	0	0.00	0.00
Tanzania, United	1,601,867	26.12	0	0.00	0.00	20,957	1.31	0.34
EFZ Total	6,132,647	100.00	23,683		0.39	118,166		1.93
EFZ CODE 8								
Republic of South Africa	7,518,434	100.00	186,205	2.48	2.48	270,276	3.59	3.59
EFZ Total	7,518,434	100.00	186,205		2.48	270,276		3.59
EFZ CODE 9								
Guinea	8,526,231	68.35	0	0.00	0.00	323,017	3.79	2.59
Guinea–Bissau	2,945,886	23.61	0	0.00	0.00	0	0.00	0.00
Senegal	377,581	3.03	3,209	0.85	0.03	3,209	0.85	0.03
Sierra Leone	625,044	5.01	0	0.00	0.00	47,678	7.63	0.38
EFZ Total	12,474,742	100.00	3,209		0.03	373,904		3.00
EFZ CODE 10								
Benin	7,618,265	4.25	280,890	3.69	0.16	1,835,971	24.10	1.02
Burkina Faso	8,358,656	4.67	78,200	0.94	0.04	293,041	3.51	0.16
Cameroon	5,309,904	2.96	697,741	13.14	0.39	697,741	13.14	0.39
Central African Republic	36,096,782	20.15	1,472,801	4.08	0.82	4,161,148	11.53	2.32
Chad	13,615,907	7.60	174,550	1.28	0.10	523,592	3.85	0.29
Cote d'Ivoire	12,494,503	6.97	1,222,730	9.79	0.68	1,257,791	10.07	0.70
Gambia	983,059	0.55	17,110	1.74	0.01	32,588	3.31	0.02
Ghana	13,695,852	7.64	929,731	6.79	0.52	1,120,423	8.18	0.63
Guinea	8,001,807	4.47	27,924	0.35	0.02	282,651	3.53	0.16
Guinea–Bissau	239,743	0.13	0	0.00	0.00	0	0.00	0.00
Mali	12,381,306	6.91	0	0.00	0.00	169,962	1.37	0.09

Annex 1
ECOFLORISTIC ZONE PROTECTION IN TROPICAL COUNTRIES OF AFRICA

	EFZ area (ha)	EFZ area % total EFZ area	PAs I–III (ha)	PAs I–III % EFZ in country	PAs I–III % total EFZ	PAs I–VIII (ha)	PAs I–VIII % EFZ in country	PAs I– VIII % total EFZ
Nigeria	34,017,479	18.99	1,216,433	3.58	0.68	1,784,098	5.24	1.00
Senegal	4,697,621	2.62	778,907	16.58	0.43	778,907	16.58	0.43
Sudan	17,881,437	9.98	1,526,074	8.53	0.85	2,212,382	12.37	1.23
Togo	3,646,476	2.04	339,296	9.30	0.19	478,649	13.13	0.27
Uganda	128,981	0.07	5,501	4.26	0.00	29,752	23.07	0.02
EFZ Total	179,167,778	100.00	8,767,888		4.89	15,658,696		8.74
EFZ CODE 11								
Sudan	7,453	0.22	0	0.00	0.00	0	0.00	0.00
Uganda	3,130,556	91.23	355,798	11.37	10.37	808,981	25.84	23.58
Zaire	293,353	8.55	0	0.00	0.00	0	0.00	0.00
EFZ Total	3,431,362	100.00	355,798		10.37	808,981		23.58
EFZ CODE 12								
Madagascar	17,533,675	100.00	251,449	1.43	1.43	419,537	2.39	2.39
EFZ Total	17,533,675	100.00	251,449		1.43	419,537		2.39
EFZ CODE 13								
Angola	46,457,613	23.40	365,734	0.79	0.18	2,720,942	5.86	1.37
Burundi	480,328	0.24	0	0.00	0.00	2,004	0.42	0.00
Mozambique	22,401,297	11.28	0	0.00	0.00	0	0.00	0.00
Malawi	10,306,114	5.19	344,420	3.34	0.17	1,006,402	9.77	0.51
Tanzania, United	32,054,436	16.14	649,879	2.03	0.33	5,940,964	18.53	2.99
Zaire	36,409,252	18.34	2,159,002	5.93	1.09	2,165,779	5.95	1.09
Zambia	50,436,682	25.40	3,234,472	6.41	1.63	11,455,678	22.71	5.77
EFZ Total	198,545,722	100.00	6,753,507		3.40	23,291,769		11.73
EFZ CODE 14								
Botswana	2,227,324	9.16	0	0.00	0.00	0	0.00	0.00
Mozambique	3,320,334	13.66	0	0.00	0.00	16	0.00	0.00
Republic of South Africa	18,756,683	77.17	1,781,852	9.50	7.33	2,023,418	10.79	8.33
EFZ Total	24,304,341	100.00	1,781,852		7.33	2,023,434		8.33
EFZ CODE 15								
Kenya	1,037,146	5.49	0	0.00	0.00	7,110	0.69	0.04
Mozambique	12,621,370	66.87	0	0.00	0.00	847	0.01	0.00
Tanzania, United	4,934,963	26.15	0	0.00	0.00	716,884	14.53	3.80
Republic of South Africa	281,183	1.49	24,825	8.83	0.13	40,292	14.33	0.21
EFZ Total	18,874,662	100.00	24,825		0.13	765,133		4.05

Annex 1
ECOFLORISTIC ZONE PROTECTION IN TROPICAL COUNTRIES OF AFRICA

	EFZ area (ha)	EFZ area % total EFZ area	PAs I–III (ha)	PAs I–III % EFZ in country	PAs I–III % total EFZ	PAs I–VIII (ha)	PAs I–VIII % EFZ in country	PAs I– VIII % total EFZ
EFZ CODE 16								
Benin	1,190,626	0.92	582,212	48.90	0.45	771,997	64.84	0.60
Burkina Faso	11,857,410	9.20	390,806	3.30	0.30	952,873	8.04	0.74
Cameroon	3,281,604	2.55	128,431	3.91	0.10	128,431	3.91	0.10
Central African Republic	5,509,745	4.27	356,635	6.47	0.28	1,681,023	30.51	1.30
Chad	16,167,424	12.54	235,184	1.45	0.18	2,219,394	13.73	1.72
Eritrea	931,916	0.72	0	0.00	0.00	110	0.01	0.00
Ethiopia	9,049,159	7.02	728,381	8.05	0.57	2,200,531	24.32	1.71
Gambia	90,564	0.07	0	0.00	0.00	0	0.00	0.00
Mali	10,201,664	7.91	395,016	3.87	0.31	937,077	9.19	0.73
Niger	1,347,343	1.05	224,269	16.65	0.17	295,011	21.90	0.23
Nigeria	18,553,933	14.39	0	0.00	0.00	285	0.00	0.00
Senegal	4,287,244	3.33	81,340	1.90	0.06	81,340	1.90	0.06
Sudan	46,436,970	36.02	5,399,939	11.63	4.19	6,601,668	14.22	5.12
EFZ Total	128,905,602	100.00	8,522,213		6.61	15,869,740		12.31
EFZ CODE 17								
Benin	197,265	11.07	0	0.00	0.00	0	0.00	0.00
Ghana	1,169,916	65.63	0	0.00	0.00	2,366	0.20	0.13
Togo	415,375	23.30	0	0.00	0.00	0	0.00	0.00
EFZ Total	1,782,556	100.00	0		0.00	2,366		0.13
EFZ CODE 18								
Angola	2,804,704	84.30	0	0.00	0.00	0	0.00	0.00
Zaire	522,189	15.70	0	0.00	0.00	0	0.00	0.00
EFZ Total	3,326,893	100.00	0		0.00	0		0.00
EFZ CODE 19								
Angola	34,527,537	19.80	411,638	1.19	0.24	1,263,966	3.66	0.72
Botswana	8,442,342	4.84	1,183,040	14.01	0.68	1,621,368	19.21	0.93
Kenya	122,697	0.07	61,534	50.15	0.04	61,534	50.15	0.04
Malawi	644,689	0.37	12,084	1.87	0.01	136,358	21.15	0.08
Mozambique	32,902,217	18.87	0	0.00	0.00	0	0.00	0.00
Namibia	11,981,480	6.87	1,583,672	13.22	0.91	2,256,388	18.83	1.29
Tanzania, United	27,718,335	15.90	1,185,176	4.28	0.68	4,085,361	14.74	2.34
Zambia	24,195,719	13.88	2,829,732	11.70	1.62	10,778,246	44.55	6.18
Zimbabwe	33,847,917	19.41	2,389,325	7.06	1.37	4,630,836	13.68	2.66
EFZ Total	174,382,933	100.00	9,656,201		5.54	24,834,057		14.24

Annex 1
ECOFLORISTIC ZONE PROTECTION IN TROPICAL COUNTRIES OF AFRICA

	EFZ area (ha)	EFZ area % total EFZ area	PAs I–III (ha)	PAs I–III % EFZ in country	PAs I–III % total EFZ	PAs I–VIII (ha)	PAs I–VIII % EFZ in country	PAs I– VIII % total EFZ
EFZ CODE 20								
Burkina Faso	7,344,563	5.71	0	0.00	0.00	1,916,856	26.10	1.49
Cameroon	974,164	0.76	122,299	12.55	0.10	122,299	12.55	0.10
Chad	14,459,703	11.24	0	0.00	0.00	140,080	0.97	0.11
Eritrea	3,663,571	2.85	0	0.00	0.00	350,271	9.56	0.27
Ethiopia	318,590	0.25	0	0.00	0.00	0	0.00	0.00
Mali	18,918,869	14.70	0	0.00	0.00	0	0.00	0.00
Mauritania	4,674,794	3.63	0	0.00	0.00	0	0.00	0.00
Niger	14,378,583	11.18	0	0.00	0.00	8,078	0.06	0.01
Nigeria	12,727,903	9.89	131,031	1.03	0.10	199,887	1.57	0.16
Senegal	8,735,168	6.79	1,959	0.02	0.00	1,248,747	14.30	0.97
Sudan	42,470,622	33.01	346,489	0.82	0.27	692,321	1.63	0.54
EFZ Total	128,666,530	100.00	601,778		0.47	4,678,539		3.64
EFZ CODE 21								
Eritrea	375,484	0.59	0	0.00	0.00	13,921	3.71	0.02
Ethiopia	17,573,240	27.42	599,929	3.41	0.94	8,696,262	49.49	13.57
Kenya	16,198,157	25.28	1,449,812	8.95	2.26	3,615,005	22.32	5.64
Somalia	14,094,918	21.99	0	0.00	0.00	0	0.00	0.00
Sudan	2,953,165	4.61	393,790	13.33	0.61	396,927	13.44	0.62
Tanzania, United	11,634,407	18.15	1,225,354	10.53	1.91	1,482,318	12.74	2.31
Uganda	1,257,928	1.96	0	0.00	0.00	1,257,928	100.00	1.96
EFZ Total	64,087,299	100.00	3,668,885		5.72	15,462,361		24.13
EFZ CODE 22								
Madagascar	9,200,686	100.00	77,613	0.84	0.84	105,386	1.15	1.15
EFZ Total	9,200,686	100.00	77,613		0.84	105,386		1.15
EFZ CODE 23								
Angola	4,289,639	5.28	0	0.00	0.00	553,600	12.91	0.68
Botswana	31,600,956	38.86	4,652,027	14.72	5.72	4,998,900	15.82	6.15
Mozambique	3,672,061	4.52	1	0.00	0.00	1	0.00	0.00
Namibia	20,366,571	25.04	457,080	2.24	0.56	781,991	3.84	0.96
Republic of South Africa	16,778,002	20.63	451,970	2.69	0.56	586,561	3.50	0.72
Zimbabwe	4,612,740	5.67	283,575	6.15	0.35	319,647	6.93	0.39
EFZ Total	81,319,969	100.00	5,844,653		7.19	7,240,700		8.90

Annex 1
ECOFLORISTIC ZONE PROTECTION IN TROPICAL COUNTRIES OF AFRICA

	EFZ area (ha)	EFZ area % total EFZ area	PAs I–III (ha)	PAs I–III % EFZ in country	PAs I–III % total EFZ	PAs I–VIII (ha)	PAs I–VIII % EFZ in country	PAs I– VIII % total EFZ
EFZ CODE 25								
Republic of South Africa	972,688	100.00	7,998	0.82	0.82	217,735	22.38	22.38
EFZ Total	972,688	100.00	7,998		0.82	217,735		22.38
EFZ CODE 27								
Republic of South Africa	3,445,999	100.00	3,171	0.09	0.09	282,285	8.19	8.19
EFZ Total	3,445,999	100.00	3,171		0.09	282,285		8.19
EFZ CODE 29								
Republic of South Africa	2,284,844	100.00	22,497	0.98	0.98	248,472	10.87	10.87
EFZ Total	2,284,844	100.00	22,497		0.98	248,472		10.87
EFZ CODE 30								
Republic of South Africa	668,718	100.00	0	0.00	0.00	27,902	4.17	4.17
EFZ Total	668,718	100.00	0		0.00	27,902		4.17
EFZ CODE 32								
Burkina Faso	21,289	0.01	0	0.00	0.00	21,289	100.00	0.01
Chad	21,629,188	14.93	0	0.00	0.00	2,551,983	11.80	1.76
Eritrea	772,376	0.53	0	0.00	0.00	55,078	7.13	0.04
Mali	23,540,838	16.25	0	0.00	0.00	1,982,917	8.42	1.37
Mauritania	22,605,992	15.61	10,985	0.05	0.01	10,985	0.05	0.01
Niger	33,042,555	22.81	0	0.00	0.00	27,725	0.08	0.02
Nigeria	531,316	0.37	0	0.00	0.00	0	0.00	0.00
Senegal	1,607,723	1.11	15,421	0.96	0.01	64,073	3.99	0.04
Sudan	41,100,955	28.37	0	0.00	0.00	0	0.00	0.00
EFZ Total	144,852,232	100.00	26,406		0.02	4,714,050		3.25
EFZ CODE 33								
Eritrea	979,300	1.62	0	0.00	0.00	135,009	13.79	0.22
Ethiopia	11,768,816	19.42	318,919	2.71	0.53	2,885,359	24.52	4.76
Kenya	27,216,739	44.91	1,248,835	4.59	2.06	1,574,785	5.79	2.60
Somalia	20,372,404	33.61	0	0.00	0.00	179,059	0.88	0.30
Sudan	270,617	0.45	0	0.00	0.00	814	0.30	0.00
EFZ Total	60,607,876	100.00	1,567,754		2.59	4,775,026		7.88
EFZ CODE 34								
Madagascar	3,681,961	100.00	14,974	0.41	0.41	15,802	0.43	0.43
EFZ Total	3,681,961	100.00	14,974		0.41	15,802		0.43

Annex 1
ECOFLORISTIC ZONE PROTECTION IN TROPICAL COUNTRIES OF AFRICA

	EFZ area (ha)	EFZ area % total EFZ area	PAs I–III (ha)	PAs I–III % EFZ in country	PAs I–III % total EFZ	PAs I–VIII (ha)	PAs I–VIII % EFZ in country	PAs I– VIII % total EFZ
EFZ CODE 35								
Angola	2,016,978	4.00	0	0.00	0.00	291,152	14.44	0.58
Botswana	14,691,760	29.17	3,065,188	20.86	6.08	3,241,025	22.06	6.43
Namibia	15,318,262	30.41	299,141	1.95	0.59	301,989	1.97	0.60
Republic of South Africa	18,001,141	35.74	380,650	2.11	0.76	486,359	2.70	0.97
Zimbabwe	345,509	0.69	0	0.00	0.00	19,952	5.77	0.04
EFZ Total	50,373,650	100.00	3,744,979		7.43	4,340,477		8.62
EFZ CODE 36*								
Chad	59,079,519	–	0	0.00	–	5,616,560	9.51	–
Mali	60,394,995	–	0	0.00	–	0	0.00	–
Mauritania	77,078,249	–	594,885	0.77	–	594,885	0.77	–
Niger	69,974,951	–	0	0.00	–	6,582,127	9.41	–
Sudan	94,855,910	–	0	0.00	–	0	0.00	–
EFZ Total	361,383,624	–	594,885		–	12,793,572		–
EFZ CODE 37								
Djibouti	2,190,702	3.98	9,946	0.45	0.02	9,946	0.45	0.02
Eritrea	3,233,901	5.87	0	0.00	0.00	0	0.00	0.00
Ethiopia	21,359,889	38.77	0	0.00	0.00	512,119	2.40	0.93
Somalia	27,924,229	50.68	0	0.00	0.00	0	0.00	0.00
Sudan	22,985	0.04	0	0.00	0.00	0	0.00	0.00
EFZ Total	54,731,706	100.00	9,946		0.02	522,065		0.95
EFZ CODE 38								
Angola	3,992,712	6.10	0	0.00	0.00	1,261,627	31.60	1.93
Botswana	973,979	1.49	351,030	36.04	0.54	351,030	36.04	0.54
Namibia	34,884,574	53.31	6,346,489	18.19	9.70	7,540,983	21.62	11.52
Republic of South Africa	25,585,264	39.10	868,784	3.40	1.33	887,545	3.47	1.36
EFZ Total	65,436,529	100.00	7,566,303		11.56	10,041,185		15.34
EFZ CODE 39								
Cote d'Ivoire	46,667	0.16	6,508	13.95	0.02	6,508	13.95	0.02
Guinea	1,045,447	3.51	7,827	0.75	0.03	22,135	2.12	0.07
Kenya	2,392,596	8.03	4,783	0.20	0.02	94,934	3.97	0.32
Liberia	10,819	0.04	1	0.01	0.00	1	0.01	0.00
Rwanda	30,900	0.10	451	1.46	0.00	451	1.46	0.00
Sierra Leone	79,234	0.27	0	0.00	0.00	0	0.00	0.00
Sudan	264,608	0.89	0	0.00	0.00	0	0.00	0.00

Annex 1
ECOFLORISTIC ZONE PROTECTION IN TROPICAL COUNTRIES OF AFRICA

	EFZ area (ha)	EFZ area % total EFZ area	PAs I–III (ha)	PAs I–III % EFZ in country	PAs I–III % total EFZ	PAs I–VIII (ha)	PAs I–VIII % EFZ in country	PAs I– VIII % total EFZ
Tanzania, United	6,862,799	23.03	37,324	0.54	0.13	67,176	0.98	0.23
Uganda	12,269,961	41.17	34,557	0.28	0.12	370,312	3.02	1.24
Zaire	6,802,520	22.82	674,117	9.91	2.26	674,117	9.91	2.26
EFZ Total	29,805,551	100.00	765,568		2.57	1,235,634		4.15
EFZ CODE 40								
Cameroon	5,978,878	75.11	15,730	0.26	0.20	21,250	0.36	0.27
Central African Republic	1,229,783	15.45	0	0.00	0.00	0	0.00	0.00
Equatorial Guinea	63,626	0.80	0	0.00	0.00	0	0.00	0.00
Nigeria	687,707	8.64	210,464	30.60	2.64	222,396	32.34	2.79
EFZ Total	7,959,994	100.00	226,194		2.84	243,646		3.06
EFZ CODE 41								
Madagascar	5,744,184	100.00	149,202	2.60	2.60	199,266	3.47	3.47
EFZ Total	5,744,184	100.00	149,202		2.60	199,266		3.47
EFZ CODE 42								
Angola	16,654,658	59.30	0	0.00	0.00	10,469	0.06	0.04
Zaire	10,753,694	38.29	0	0.00	0.00	0	0.00	0.00
Zambia	677,010	2.41	0	0.00	0.00	283	0.04	0.00
EFZ Total	28,085,362	100.00	0		0.00	10,752		0.04
EFZ CODE 43								
Cameroon	247,599	1.00	13,672	5.52	0.06	13,672	5.52	0.06
Ethiopia	18,246,288	73.56	111,590	0.61	0.45	600,369	3.29	2.42
Kenya	71,376	0.29	0	0.00	0.00	0	0.00	0.00
Nigeria	1,223,958	4.93	0	0.00	0.00	11,576	0.95	0.05
Sudan	1,178,029	4.75	894	0.08	0.00	121,320	10.30	0.49
Uganda	3,836,992	15.47	128,224	3.34	0.52	1,438,745	37.50	5.80
EFZ Total	24,804,242	100.00	254,380		1.03	2,185,682		8.81
EFZ CODE 44								
Ethiopia	8,301,709	94.71	410,486	4.94	4.68	1,663,272	20.04	18.98
Somalia	463,370	5.29	0	0.00	0.00	0	0.00	0.00
EFZ Total	8,765,079	100.00	410,486		4.68	1,663,272		18.98
EFZ CODE 45								
Madagascar	13,244,282	100.00	602	0.00	0.00	128,601	0.97	0.97
EFZ Total	13,244,282	100.00	602		0.00	128,601		0.97

Annex 1
ECOFLORISTIC ZONE PROTECTION IN TROPICAL COUNTRIES OF AFRICA

	EFZ area (ha)	EFZ area % total EFZ area	PAs I–III (ha)	PAs I–III % EFZ in country	PAs I–III % total EFZ	PAs I–VIII (ha)	PAs I–VIII % EFZ in country	PAs I– VIII % total EFZ
EFZ CODE 47*								
Chad	1,982,683	–	0	0.00	–	0	0.00	–
EFZ Total	1,982,683	–	0		–	0		–
EFZ CODE 49								
Republic of South Africa	6,761,158	100.00	1,481	0.02	0.02	99,932	1.48	1.48
EFZ Total	6,761,158	100.00	1,481		0.02	99,932		1.48
EFZ CODE 50								
Republic of South Africa	15,345,187	100.00	0	0.00	0.00	119,052	0.78	0.78
EFZ Total	15,345,187	100.00	0		0.00	119,052		0.78
EFZ CODE 51								
Burundi	1,259,211	16.00	0	0.00	0.00	71,124	5.65	0.90
Kenya	1,024,531	13.01	12,581	1.23	0.16	12,581	1.23	0.16
Rwanda	1,207,271	15.34	251,664	20.85	3.20	295,991	24.52	3.76
Tanzania, United	1,510,194	19.18	1	0.00	0.00	65,403	4.33	0.83
Uganda	2,287,057	29.05	340,336	14.88	4.32	495,373	21.66	6.29
Zaire	583,911	7.42	141,692	24.27	1.80	181,326	31.05	2.30
EFZ Total	7,872,175	100.00	746,274		9.48	1,121,798		14.25
EFZ CODE 52								
Eritrea	1,412,369	12.73	0	0.00	0.00	38,015	2.69	0.34
Ethiopia	2,048,048	18.46	4,265	0.21	0.04	301,043	14.70	2.71
Kenya	4,793,927	43.22	258,322	5.39	2.33	388,133	8.10	3.50
Somalia	88,866	0.80	0	0.00	0.00	0	0.00	0.00
Sudan	206,019	1.86	0	0.00	0.00	0	0.00	0.00
Tanzania, United	2,543,100	22.93	696,667	27.39	6.28	1,198,808	47.14	10.81
EFZ Total	11,092,329	100.00	959,254		8.65	1,925,999		17.36
EFZ CODE 53								
Kenya	96,349	100.00	1,020	1.06	1.06	1,020	1.06	1.06
EFZ Total	96,349	100.00	1,020		1.06	1,020		1.06
EFZ CODE 54								
Kenya	649,114	30.30	46,442	7.15	2.17	202,573	31.21	9.46
Somalia	682,539	31.86	0	0.00	0.00	0	0.00	0.00
Sudan	434,612	20.29	0	0.00	0.00	0	0.00	0.00

Annex 1
ECOFLORISTIC ZONE PROTECTION IN TROPICAL COUNTRIES OF AFRICA

	EFZ area (ha)	EFZ area % total EFZ area	PAs I–III (ha)	PAs I–III % EFZ in country	PAs I–III % total EFZ	PAs I–VIII (ha)	PAs I–VIII % EFZ in country	PAs I– VIII % total EFZ
Uganda	376,135	17.56	907	0.24	0.04	376,135	100.00	17.56
EFZ Total	2,142,400	100.00	47,349		2.21	578,708		27.01
EFZ CODE 56								
Angola	119,314	0.34	0	0.00	0.00	0	0.00	0.00
Burundi	974,988	2.81	0	0.00	0.00	25,730	2.64	0.07
Ethiopia	16,005,513	46.17	34,632	0.22	0.10	1,822,823	11.39	5.26
Kenya	3,862,613	11.14	60,986	1.58	0.18	906,819	23.48	2.62
Malawi	896,936	2.59	259,052	28.88	0.75	386,449	43.09	1.11
Mozambique	207,807	0.60	0	0.00	0.00	0	0.00	0.00
Republic of South Africa	541,900	1.56	0	0.00	0.00	16,337	3.01	0.05
Rwanda	1,299,194	3.75	25,313	1.95	0.07	110,831	8.53	0.32
Sudan	229,430	0.66	0	0.00	0.00	7,927	3.46	0.02
Tanzania, United	5,262,824	15.18	196,232	3.73	0.57	509,358	9.68	1.47
Uganda	818,455	2.36	81,699	9.98	0.24	165,481	20.22	0.48
Zaire	3,972,762	11.46	324,043	8.16	0.93	370,157	9.32	1.07
Zambia	93,192	0.27	2,871	3.08	0.01	2,871	3.08	0.01
Zimbabwe	380,611	1.10	22,515	5.92	0.06	30,012	7.89	0.09
EFZ Total	34,665,539	100.00	1,007,343		2.91	4,354,795		12.56
EFZ CODE 57								
Madagascar	575,088	100.00	32,944	5.73	5.73	32,944	5.73	5.73
EFZ Total	575,088	100.00	32,944		5.73	32,944		5.73
EFZ CODE 58								
Republic of South Africa	2,718,707	100.00	165,693	6.09	6.09	269,886	9.93	9.93
EFZ Total	2,718,707	100.00	165,693		6.09	269,886		9.93
EFZ CODE 60*								
Chad	401,018	–	0	0.00	–	0	0.00	–
EFZ Total	401,018	–	0		–	0		–
EFZ CODE 61								
Eritrea	709,541	10.24	0	0.00	0.00	0	0.00	0.00
Ethiopia	6,199,247	89.51	122,436	1.98	1.77	136,695	2.21	1.97
Sudan	17,024	0.25	0	0.00	0.00	0	0.00	0.00
EFZ Total	6,925,812	100.00	122,436		1.77	136,695		1.97

Annex 1
ECOFLORISTIC ZONE PROTECTION IN TROPICAL COUNTRIES OF AFRICA

	EFZ area (ha)	EFZ area % total EFZ area	PAs I–III (ha)	PAs I–III % EFZ in country	PAs I–III % total EFZ	PAs I–VIII (ha)	PAs I–VIII % EFZ in country	PAs I– VIII % total EFZ
EFZ CODE 62								
Republic of South Africa	4,786,751	100.00	11,569	0.24	0.24	19,087	0.40	0.40
EFZ Total	4,786,751	100.00	11,569		0.24	19,087		0.40
EFZ CODE 64								
Ethiopia	2,501,989	84.91	194,548	7.78	6.60	966,372	38.62	32.79
Kenya	245,830	8.34	124,730	50.74	4.23	189,547	77.10	6.43
Tanzania, United	120,806	4.10	62,641	51.85	2.13	109,583	90.71	3.72
Uganda	76,045	2.58	0	0.00	0.00	16,577	21.80	0.56
Zaire	2,055	0.07	1,617	78.69	0.05	1,617	78.69	0.05
EFZ Total	2,946,725	100.00	383,536		13.02	1,283,696		43.56
EFZ CODE 65								
Republic of South Africa	758,445	100.00	73,697	9.72	9.72	73,697	9.72	9.72
EFZ Total	758,445	100.00	73,697		9.72	73,697		9.72
Regional Totals	2,420,712,076		74,249,718			184,297,392		7.61

* Ecofloristic zone extends outside region

Annex 2
NATIONAL PROTECTION OF ECOFLORISTIC ZONES IN TROPICAL AFRICA

EFZ code	EFZ area (ha)	EFZ area % country area	PAs I–III (ha)	PAs I–III % country area	PAs I–VIII (ha)	PAs I–VIII % country area
Angola						
5	14,319,164	11.44	0	0.00	0	0.00
13	46,457,613	37.11	365,734	0.79	2,720,942	4.48
18	2,804,704	2.24	0	0.00	0	0.00
19	34,527,537	27.58	411,638	1.19	1,263,966	1.29
23	4,289,639	3.43	0	0.00	553,600	0.54
35	2,016,978	1.61	0	0.00	291,152	0.28
38	3,992,712	3.19	0	0.00	1,261,627	1.16
42	16,654,658	13.30	0	0.00	10,469	0.01
56	119,314	0.10	0	0.00	0	0.00
Country Total	125,182,319	100.00	777,372	0.62	6,101,756	4.87
Benin						
5	2,599,375	22.40	0	0.00	148,072	5.70
10	7,618,265	65.64	280,890	3.69	1,835,971	17.97
16	1,190,626	10.26	582,212	48.90	771,997	6.77
17	197,265	1.70	0	0.00	0	0.00
Country Total	11,605,531	100.00	863,102	7.44	2,756,040	23.75
Botswana						
14	2,227,324	3.84	0	0.00	0	0.00
19	8,442,342	14.57	1,183,040	14.01	1,621,368	15.20
23	31,600,956	54.54	4,652,027	14.72	4,998,900	11.83
35	14,691,760	25.36	3,065,188	20.86	3,241,025	5.69
38	973,979	1.68	351,030	36.04	351,030	0.61
Country Total	57,936,361	99.99	9,251,285	15.97	10,212,323	17.63
Burkina Faso						
10	8,358,656	30.30	78,200	0.94	293,041	3.51
16	11,857,410	42.99	390,806	3.30	952,873	4.71
20	7,344,563	26.63	0	0.00	1,916,856	6.96
32	21,289	0.08	0	0.00	21,289	0.08
Country Total	27,581,918	100.00	469,006	1.70	3,184,059	11.54
Burundi						
13	480,328	17.69	0	0.00	2,004	0.42
51	1,259,211	46.39	0	0.00	71,124	4.09
56	974,988	35.92	0	0.00	25,730	0.95
Country Total	2,714,527	100.00	0	0.00	98,858	3.64

Annex 2
NATIONAL PROTECTION OF ECOFLORISTIC ZONES IN TROPICAL AFRICA

EFZ code	EFZ area (ha)	EFZ area % country area	PAs I–III (ha)	PAs I–III % country area	PAs I–VIII (ha)	PAs I– VIII % country area
Cameroon						
1	11,758,309	25.13	0	0.00	900,494	7.66
4	1,341,509	2.87	53,628	4.00	189,217	1.44
5	17,895,795	38.25	88,300	0.49	88,317	0.28
10	5,309,904	11.35	697,741	13.14	697,741	1.92
16	3,281,604	7.01	128,431	3.91	128,431	0.32
20	974,164	2.08	122,299	12.55	122,299	0.30
40	5,978,878	12.78	15,730	0.26	21,250	0.05
43	247,599	0.53	13,672	5.52	13,672	0.03
Country Total	46,787,762	100.00	1,119,801	2.39	2,161,421	4.62
Central African Republic						
1	715,259	1.15	113,074	15.81	450,733	63.02
5	18,856,250	30.21	0	0.00	6,299	0.03
10	36,096,782	57.84	1,472,801	4.08	4,161,148	7.47
16	5,509,745	8.83	356,635	6.47	1,681,023	2.75
40	1,229,783	1.97	0	0.00	0	0.00
Country Total	62,407,819	100.00	1,942,510	3.11	6,299,203	10.09
Chad						
10	13,615,907	10.69	174,550	1.28	523,592	3.85
16	16,167,424	12.70	235,184	1.45	2,219,394	7.45
20	14,459,703	11.36	0	0.00	140,080	0.32
32	21,629,188	16.99	0	0.00	2,551,983	3.87
36	59,079,519	46.40	0	0.00	5,616,560	4.49
47	1,982,683	1.56	0	0.00	0	0.00
60	401,018	0.31	0	0.00	0	0.00
Country Total	127,335,442	100.01	409,734	0.32	11,051,609	8.68
Congo						
1	7,798,814	22.72	0	0.00	0	0.00
5	26,531,177	77.28	131,689	0.50	1,118,102	3.26
Country Total	34,329,991	100.00	131,689	0.38	1,118,102	3.26
Cote d'Ivoire						
5	19,773,073	61.19	729,415	3.69	817,376	4.13
10	12,494,503	38.67	1,222,730	9.79	1,257,791	3.90
39	46,667	0.14	6,508	13.95	6,508	0.02
Country Total	32,314,243	100.00	1,958,653	6.06	2,081,675	6.44

Annex 2
NATIONAL PROTECTION OF ECOFLORISTIC ZONES IN TROPICAL AFRICA

EFZ code	EFZ area (ha)	EFZ area % country area	PAs I–III (ha)	PAs I–III % country area	PAs I–VIII (ha)	PAs I– VIII % country area
Djibouti						
37	2,190,702	100.00	9,946	0.45	9,946	0.45
Country Total	2,190,702	100.00	9,946	0.45	9,946	0.45
Equatorial Guinea						
1	1,153,594	42.94	0	0.00	0	0.00
5	1,469,359	54.69	0	0.00	0	0.00
40	63,626	2.37	0	0.00	0	0.00
Country Total	2,686,579	100.00	0	0.00	0	0.00
Eritrea						
16	931,916	7.72	0	0.00	110	0.01
20	3,663,571	30.33	0	0.00	350,271	7.62
21	375,484	3.11	0	0.00	13,921	0.28
32	772,376	6.39	0	0.00	55,078	0.96
33	979,300	8.11	0	0.00	135,009	2.01
37	3,233,901	26.77	0	0.00	0	0.00
52	1,412,369	11.69	0	0.00	38,015	0.33
61	709,541	5.87	0	0.00	0	0.00
Country Total	12,078,458	99.99	0	0.00	592,404	4.90
Ethiopia						
16	9,049,159	7.98	728,381	8.05	2,200,531	24.32
20	318,590	0.28	0	0.00	0	0.00
21	17,573,240	15.50	599,929	3.41	8,696,262	32.28
33	11,768,816	10.38	318,919	2.71	2,885,359	7.45
37	21,359,889	18.84	0	0.00	512,119	0.85
43	18,246,288	16.09	111,590	0.61	600,369	0.77
44	8,301,709	7.32	410,486	4.94	1,663,272	1.92
52	2,048,048	1.81	4,265	0.21	301,043	0.34
56	16,005,513	14.12	34,632	0.22	1,822,823	1.74
61	6,199,247	5.47	122,436	1.98	136,695	0.12
64	2,501,989	2.21	194,548	7.78	966,372	0.85
Country Total	113,372,488	100.00	2,525,186	2.23	19,784,845	17.45
Gabon						
1	1,470,529	5.54	0	0.00	0	0.00
5	25,074,884	94.46	9,986	0.04	1,875,160	7.06
Country Total	26,545,413	100.00	9,986	0.04	1,875,160	7.06

Annex 2
NATIONAL PROTECTION OF ECOFLORISTIC ZONES IN TROPICAL AFRICA

EFZ code	EFZ area (ha)	EFZ area % country area	PAs I–III (ha)	PAs I–III % country area	PAs I–VIII (ha)	PAs I– VIII % country area
Gambia						
10	983,059	91.56	17,110	1.74	32,588	3.31
16	90,564	8.44	0	0.00	0	0.00
Country Total	1,073,623	100.00	17,110	1.59	32,588	3.04
Ghana						
5	9,097,206	37.96	252,864	2.78	419,064	4.61
10	13,695,852	57.15	929,731	6.79	1,120,423	4.92
17	1,169,916	4.88	0	0.00	2,366	0.01
Country Total	23,962,974	99.99	1,182,595	4.94	1,541,853	6.43
Guinea						
4	1,282,351	5.22	0	0.00	30,800	2.40
5	5,709,173	23.24	92,595	1.62	331,477	4.74
9	8,526,231	34.71	0	0.00	323,017	2.08
10	8,001,807	32.57	27,924	0.35	282,651	1.20
39	1,045,447	4.26	7,827	0.75	22,135	0.09
Country Total	24,565,009	100.00	128,346	0.52	990,080	4.03
Guinea–Bissau						
5	197,332	5.83	0	0.00	0	0.00
9	2,945,886	87.08	0	0.00	0	0.00
10	239,743	7.09	0	0.00	0	0.00
Country Total	3,382,961	100.00	0	0.00	0	0.00
Kenya						
7	813,672	1.39	23,683	2.91	97,209	11.95
15	1,037,146	1.77	0	0.00	7,110	0.38
19	122,697	0.21	61,534	50.15	61,534	3.12
21	16,198,157	27.68	1,449,812	8.95	3,615,005	19.89
33	27,216,739	46.50	1,248,835	4.59	1,574,785	3.47
39	2,392,596	4.09	4,783	0.20	94,934	0.20
43	71,376	0.12	0	0.00	0	0.00
51	1,024,531	1.75	12,581	1.23	12,581	0.03
52	4,793,927	8.19	258,322	5.39	388,133	0.72
53	96,349	0.16	1,020	1.06	1,020	0.00
54	649,114	1.11	46,442	7.15	202,573	0.37
56	3,862,613	6.60	60,986	1.58	906,819	1.56
64	245,830	0.42	124,730	50.74	189,547	0.32
Country Total	58,524,747	99.99	3,292,728	5.63	7,151,250	12.22

Annex 2
NATIONAL PROTECTION OF ECOFLORISTIC ZONES IN TROPICAL AFRICA

EFZ code	EFZ area (ha)	EFZ area % country area	PAs I–III (ha)	PAs I–III % country area	PAs I–VIII (ha)	PAs I– VIII % country area
Liberia						
4	2,442,420	25.35	0	0.00	0	0.00
5	7,182,522	74.54	96,536	1.34	96,536	1.00
39	10,819	0.11	1	0.01	1	0.00
Country Total	9,635,761	100.00	96,537	1.00	96,537	1.00
Madagascar						
2	18,273	0.03	0	0.00	0	0.00
3	9,000,190	15.17	205,120	2.28	221,874	2.46
6	319,369	0.54	1,108	0.35	1,108	0.01
12	17,533,675	29.56	251,449	1.43	419,537	1.56
22	9,200,686	15.51	77,613	0.84	105,386	0.29
34	3,681,961	6.21	14,974	0.41	15,802	0.04
41	5,744,184	9.68	149,202	2.60	199,266	0.44
45	13,244,282	22.33	602	0.00	128,601	0.22
57	575,088	0.97	32,944	5.73	32,944	0.06
Country Total	59,317,708	100.00	733,012	1.24	1,124,518	1.90
Malawi						
13	10,306,114	86.99	344,420	3.34	1,006,402	9.77
19	644,689	5.44	12,084	1.87	136,358	1.25
56	896,936	7.57	259,052	28.88	386,449	3.26
Country Total	11,847,739	100.00	615,556	5.20	1,529,209	12.91
Mali						
10	12,381,306	9.87	0	0.00	169,962	1.37
16	10,201,664	8.13	395,016	3.87	937,077	4.15
20	18,918,869	15.08	0	0.00	0	0.00
32	23,540,838	18.77	0	0.00	1,982,917	3.05
36	60,394,995	48.15	0	0.00	0	0.00
Country Total	125,437,672	100.00	395,016	0.31	3,089,956	2.46
Mauritania						
20	4,674,794	4.48	0	0.00	0	0.00
32	22,605,992	21.66	10,985	0.05	10,985	0.04
36	77,078,249	73.86	594,885	0.77	594,885	0.57
Country Total	104,359,035	100.00	605,870	0.58	605,870	0.58

Annex 2
NATIONAL PROTECTION OF ECOFLORISTIC ZONES IN TROPICAL AFRICA

EFZ code	EFZ area (ha)	EFZ area % country area	PAs I–III (ha)	PAs I–III % country area	PAs I–VIII (ha)	PAs I– VIII % country area
Mozambique						
7	3,717,108	4.71	0	0.00	0	0.00
13	22,401,297	28.41	0	0.00	0	0.00
14	3,320,334	4.21	0	0.00	16	0.00
15	12,621,370	16.01	0	0.00	847	0.00
19	32,902,217	41.73	0	0.00	0	0.00
23	3,672,061	4.66	1	0.00	1	0.00
56	207,807	0.26	0	0.00	0	0.00
Country Total	78,842,194	99.99	1	0.00	864	0.00
Namibia						
19	11,981,480	14.51	1,583,672	13.22	2,256,388	18.83
23	20,366,571	24.67	457,080	2.24	781,991	2.42
35	15,318,262	18.56	299,141	1.95	301,989	0.63
38	34,884,574	42.26	6,346,489	18.19	7,540,983	9.13
Country Total	82,550,887	100.00	8,686,486	10.52	10,881,455	13.18
Niger						
16	1,347,343	1.13	224,269	16.65	295,011	21.90
20	14,378,583	12.11	0	0.00	8,078	0.05
32	33,042,555	27.83	0	0.00	27,725	0.06
36	69,974,951	58.93	0	0.00	6,582,127	5.54
Country Total	118,743,432	100.00	224,269	0.19	6,912,941	5.82
Nigeria						
4	2,383,280	2.61	44,812	1.88	44,812	1.88
5	21,066,144	23.10	559,624	2.66	801,463	3.42
10	34,017,479	37.30	1,216,433	3.58	1,784,098	3.10
16	18,553,933	20.35	0	0.00	285	0.00
20	12,727,903	13.96	131,031	1.03	199,887	0.23
32	531,316	0.58	0	0.00	0	0.00
40	687,707	0.75	210,464	30.60	222,396	0.25
43	1,223,958	1.34	0	0.00	11,576	0.01
Country Total	91,191,720	99.99	2,162,364	2.37	3,064,517	3.36
Rwanda						
39	30,900	1.22	451	1.46	451	1.46
51	1,207,271	47.58	251,664	20.85	295,991	23.91
56	1,299,194	51.20	25,313	1.95	110,831	4.37
Country Total	2,537,365	100.00	277,428	10.93	407,273	16.05

Annex 2
NATIONAL PROTECTION OF ECOFLORISTIC ZONES IN TROPICAL AFRICA

EFZ code	EFZ area (ha)	EFZ area % country area	PAs I–III (ha)	PAs I–III % country area	PAs I–VIII (ha)	PAs I– VIII % country area
Senegal						
9	377,581	1.92	3,209	0.85	3,209	0.85
10	4,697,621	23.84	778,907	16.58	778,907	15.35
16	4,287,244	21.76	81,340	1.90	81,340	0.87
20	8,735,168	44.33	1,959	0.02	1,248,747	6.90
32	1,607,723	8.16	15,421	0.96	64,073	0.33
Country Total	19,705,337	100.01	880,836	4.47	2,176,276	11.04
Sierra Leone						
4	3,106,162	42.79	0	0.00	17,909	0.58
5	3,448,200	47.50	0	0.00	147,975	2.26
9	625,044	8.61	0	0.00	47,678	0.66
39	79,234	1.09	0	0.00	0	0.00
Country Total	7,258,640	99.99	0	0.00	213,562	2.94
Somalia						
21	14,094,918	22.15	0	0.00	0	0.00
33	20,372,404	32.02	0	0.00	179,059	0.52
37	27,924,229	43.89	0	0.00	0	0.00
44	463,370	0.73	0	0.00	0	0.00
52	88,866	0.14	0	0.00	0	0.00
54	682,539	1.07	0	0.00	0	0.00
Country Total	63,626,326	100.00	0	0.00	179,059	0.28
Republic of South Africa						
8	7,518,434	6.00	186,205	2.48	270,276	3.59
14	18,756,683	14.98	1,781,852	9.50	2,023,418	7.70
15	281,183	0.22	24,825	8.83	40,292	0.15
23	16,778,002	13.40	451,970	2.69	586,561	1.35
25	972,688	0.78	7,998	0.82	217,735	0.49
27	3,445,999	2.75	3,171	0.09	282,285	0.59
29	2,284,844	1.82	22,497	0.98	248,472	0.50
30	668,718	0.53	0	0.00	27,902	0.06
35	18,001,141	14.38	380,650	2.11	486,359	0.71
38	25,585,264	20.43	868,784	3.40	887,545	0.94
49	6,761,158	5.40	1,481	0.02	99,932	0.10
50	15,345,187	12.26	0	0.00	119,052	0.10
56	541,900	0.43	0	0.00	16,337	0.01
58	2,718,707	2.17	165,693	6.09	269,886	0.23
62	4,786,751	3.82	11,569	0.24	19,087	0.02

Annex 2
NATIONAL PROTECTION OF ECOFLORISTIC ZONES IN TROPICAL AFRICA

EFZ code	EFZ area (ha)	EFZ area % country area	PAs I–III (ha)	PAs I–III % country area	PAs I–VIII (ha)	PAs I– VIII % country area
65	758,445	0.61	73,697	9.72	73,697	0.06
Country Total	125,205,104	99.98	4,040,025	3.23	5,846,659	4.67
Sudan						
5	3,007,887	1.20	0	0.00	11,398	0.38
10	17,881,437	7.11	1,526,074	8.53	2,212,382	10.59
11	7,453	0.00	0	0.00	0	0.00
16	46,436,970	18.48	5,399,939	11.63	6,601,668	9.80
20	42,470,622	16.90	346,489	0.82	692,321	0.63
21	2,953,165	1.17	393,790	13.33	396,927	0.35
32	41,100,955	16.35	0	0.00	0	0.00
33	270,617	0.11	0	0.00	814	0.00
36	94,855,910	37.74	0	0.00	0	0.00
37	22,985	0.01	0	0.00	0	0.00
39	264,608	0.11	0	0.00	0	0.00
43	1,178,029	0.47	894	0.08	121,320	0.05
52	206,019	0.08	0	0.00	0	0.00
54	434,612	0.17	0	0.00	0	0.00
56	229,430	0.09	0	0.00	7,927	0.00
61	17,024	0.01	0	0.00	0	0.00
Country Total	251,337,723	100.00	7,667,186	3.05	10,044,757	4.00
Tanzania, United Republic						
7	1,601,867	1.70	0	0.00	20,957	1.31
13	32,054,436	34.01	649,879	2.03	5,940,964	17.65
15	4,934,963	5.24	0	0.00	716,884	1.86
19	27,718,335	29.41	1,185,176	4.28	4,085,361	6.16
21	11,634,407	12.35	1,225,354	10.53	1,482,318	1.90
39	6,862,799	7.28	37,324	0.54	67,176	0.08
51	1,510,194	1.60	1	0.00	65,403	0.08
52	2,543,100	2.70	696,667	27.39	1,198,808	1.35
56	5,262,824	5.58	196,232	3.73	509,358	0.54
64	120,806	0.13	62,641	51.85	109,583	0.12
Country Total	94,243,731	100.00	4,053,274	4.30	14,196,812	15.06
Togo						
5	1,671,506	29.15	0	0.00	36,806	2.20
10	3,646,476	63.60	339,296	9.30	478,649	9.00
17	415,375	7.24	0	0.00	0	0.00
Country Total	5,733,357	99.99	339,296	5.92	515,455	8.99

Annex 2
NATIONAL PROTECTION OF ECOFLORISTIC ZONES IN TROPICAL AFRICA

EFZ code	EFZ area (ha)	EFZ area % country area	PAs I–III (ha)	PAs I–III % country area	PAs I–VIII (ha)	PAs I– VIII % country area
Uganda						
10	128,981	0.53	5,501	4.26	29,752	23.07
11	3,130,556	12.95	355,798	11.37	808,981	24.82
21	1,257,928	5.20	0	0.00	1,257,928	27.85
39	12,269,961	50.74	34,557	0.28	370,312	2.21
43	3,836,992	15.87	128,224	3.34	1,438,745	6.98
51	2,287,057	9.46	340,336	14.88	495,373	2.16
54	376,135	1.56	907	0.24	376,135	1.62
56	818,455	3.38	81,699	9.98	165,481	0.69
64	76,045	0.31	0	0.00	16,577	0.07
Country Total	24,182,110	100.00	947,022	3.92	4,959,284	20.51
Zaire						
1	82,037,765	35.09	4,765,391	5.81	4,837,019	5.90
5	92,410,487	39.53	1,667,876	1.80	6,119,603	3.51
11	293,353	0.13	0	0.00	0	0.00
13	36,409,252	15.57	2,159,002	5.93	2,165,779	1.03
18	522,189	0.22	0	0.00	0	0.00
39	6,802,520	2.91	674,117	9.91	674,117	0.31
42	10,753,694	4.60	0	0.00	0	0.00
51	583,911	0.25	141,692	24.27	181,326	0.08
56	3,972,762	1.70	324,043	8.16	370,157	0.16
64	2,055	0.00	1,617	78.69	1,617	0.00
Country Total	233,787,988	100.00	9,733,738	4.16	14,349,618	6.14
Zambia						
13	50,436,682	66.89	3,234,472	6.41	11,455,678	22.71
19	24,195,719	32.09	2,829,732	11.70	10,778,246	14.44
42	677,010	0.90	0	0.00	283	0.00
56	93,192	0.12	2,871	3.08	2,871	0.00
Country Total	75,402,603	100.00	6,067,075	8.05	22,237,078	29.49
Zimbabwe						
19	33,847,917	86.38	2,389,325	7.06	4,630,836	13.68
23	4,612,740	11.77	283,575	6.15	319,647	0.83
35	345,509	0.88	0	0.00	19,952	0.05
56	380,611	0.97	22,515	5.92	30,012	0.08
Country Total	39,186,777	100.00	2,695,415	6.88	5,000,447	12.76

Annex 3
MOIST FOREST PROTECTION IN TROPICAL COUNTRIES OF AFRICA

	Forest Area (FA) (ha)	FA % total FA	PAs I–III (ha)	PAs I–III % FA in country	PAs I–III % total FA	PAs I–VIII (ha)	PAs I– VIII % FA in country	PAs I– VIII % total FA
Forest Code 10								
Benin	27,551	0.15	0	0.00	0.00	12	0.04	0.00
Burundi	208,731	1.11	0	0.00	0.00	1,366	0.65	0.01
Cameroon	347,135	1.85	13,083	3.77	0.07	13,731	3.96	0.07
Central African Republic	68,632	0.37	0	0.00	0.00	3,101	4.52	0.02
Chad	1	0.00	0	0.00	0.00	0	0.00	0.00
Congo	367,950	1.96	0	0.00	0.00	43	0.01	0.00
Cote d'Ivoire	284,049	1.51	0	0.00	0.00	414	0.15	0.00
Equatorial Guinea	13,457	0.07	0	0.00	0.00	0	0.00	0.00
Ethiopia	753,191	4.01	48,468	6.44	0.26	63,828	8.47	0.34
Gabon	48,468	0.26	37	0.08	0.00	13,465	27.78	0.07
Gambia	2,185	0.01	0	0.00	0.00	0	0.00	0.00
Ghana	58,792	0.31	3,989	6.78	0.02	3,989	6.78	0.02
Guinea	3,865	0.02	0	0.00	0.00	70	1.81	0.00
Guinea–Bissau	790	0.00	0	0.00	0.00	0	0.00	0.00
Kenya	1,198,526	6.38	9,953	0.83	0.05	12,126	1.01	0.06
Liberia	19,647	0.10	0	0.00	0.00	0	0.00	0.00
Madagascar	160,467	0.85	2,385	1.49	0.01	8,761	5.46	0.05
Mali	4,035	0.02	0	0.00	0.00	0	0.00	0.00
Mauritania	36,924	0.20	600	1.62	0.00	600	1.62	0.00
Mozambique	71	0.00	0	0.00	0.00	0	0.00	0.00
Niger	2	0.00	0	0.00	0.00	0	0.00	0.00
Nigeria	895,300	4.76	20,580	2.30	0.11	20,921	2.34	0.11
Rwanda	144,511	0.77	0	0.00	0.00	0	0.00	0.00
Senegal	83,326	0.44	5,123	6.15	0.03	5,732	6.88	0.03
Sierra Leone	39,353	0.21	0	0.00	0.00	0	0.00	0.00
Tanzania, United	5,486,932	29.20	71,669	1.31	0.38	317,322	5.78	1.69
Togo	6,973	0.04	0	0.00	0.00	0	0.00	0.00
Uganda	3,595,823	19.14	38,982	1.08	0.21	45,190	1.26	0.24
Zaire	4,933,651	26.26	93,177	1.89	0.50	94,164	1.91	0.50
Zambia	23	0.00	0	0.00	0.00	0	0.00	0.00
Forest Total	18,790,361	100.00	308,046		1.64	604,835		3.22
Forest Code 111								
Benin	7,103	0.21	0	0.00	0.00	0	0.00	0.00
Cameroon	244,549	7.14	0	0.00	0.00	19,800	8.10	0.58
Cote d'Ivoire	2,911	0.09	1,468	50.43	0.04	1,468	50.43	0.04
Equatorial Guinea	25,684	0.75	0	0.00	0.00	0	0.00	0.00
Gabon	619,662	18.10	0	0.00	0.00	36,004	5.81	1.05

Annex 3
MOIST FOREST PROTECTION IN TROPICAL COUNTRIES OF AFRICA

	Forest Area (FA) (ha)	FA % total FA	PAs I–III (ha)	PAs I–III % FA in country	PAs I–III % total FA	PAs I–VIII (ha)	PAs I– VIII % FA in country	PAs I– VIII % total FA
Gambia	51,330	1.50	1,243	2.42	0.04	2,438	4.75	0.07
Ghana	334	0.01	0	0.00	0.00	0	0.00	0.00
Guinea	296,194	8.65	0	0.00	0.00	162	0.05	0.00
Guinea–Bissau	318,761	9.31	0	0.00	0.00	0	0.00	0.00
Liberia	631	0.02	0	0.00	0.00	0	0.00	0.00
Madagascar	331,474	9.68	0	0.00	0.00	574	0.17	0.02
Nigeria	1,046,432	30.56	0	0.00	0.00	2,526	0.24	0.07
Senegal	157,574	4.60	4,505	2.86	0.13	4,505	2.86	0.13
Sierra Leone	101,505	2.96	0	0.00	0.00	1,672	1.65	0.05
Tanzania, United	197,371	5.76	0	0.00	0.00	834	0.42	0.02
Zaire	22,250	0.65	0	0.00	0.00	0	0.00	0.00
Forest Total	3,424,166	100.00	7,216		0.21	69,983		2.04
Forest Code 113								
Cameroon	221,160	1.11	0	0.00	0.00	0	0.00	0.00
Central African Republic	479,707	2.41	11,591	2.42	0.06	31,387	6.54	0.16
Congo	6,252,100	31.42	0	0.00	0.00	0	0.00	0.00
Cote d'Ivoire	40,746	0.20	377	0.93	0.00	377	0.93	0.00
Gabon	400,893	2.01	0	0.00	0.00	0	0.00	0.00
Sierra Leone	4,269	0.02	0	0.00	0.00	0	0.00	0.00
Tanzania, United	2,131	0.01	0	0.00	0.00	0	0.00	0.00
Uganda	24,402	0.12	258	1.06	0.00	3,327	13.63	0.02
Zaire	12,473,943	62.69	216,021	1.73	1.09	216,021	1.73	1.09
Forest Total	19,899,368	100.00	228,247		1.15	251,112		1.26
Forest Code 121								
Burundi	41,179	0.26	0	0.00	0.00	36,361	88.30	0.23
Cameroon	320,093	2.00	504	0.16	0.00	637	0.20	0.00
Cote d'Ivoire	13,799	0.09	2,375	17.21	0.01	2,375	17.21	0.01
Equatorial Guinea	54,639	0.34	0	0.00	0.00	0	0.00	0.00
Eritrea	89,243	0.56	0	0.00	0.00	0	0.00	0.00
Ethiopia	4,636,303	29.02	138,426	2.99	0.87	1,246,271	26.88	7.80
Guinea	20,974	0.13	4,436	21.15	0.03	4,436	21.15	0.03
Kenya	1,656,072	10.37	96,515	5.83	0.60	912,522	55.10	5.71
Liberia	5,464	0.03	0	0.00	0.00	0	0.00	0.00
Madagascar	2,296,034	14.37	126,158	5.49	0.79	144,865	6.31	0.91
Rwanda	155,229	0.97	25,313	16.31	0.16	155,010	99.86	0.97
Sierra Leone	8,138	0.05	0	0.00	0.00	3,312	40.70	0.02
Sao Tome and Principe	7,519	0.05	0	0.00	0.00	0	0.00	0.00

Annex 3
MOIST FOREST PROTECTION IN TROPICAL COUNTRIES OF AFRICA

	Forest Area (FA) (ha)	FA % total FA	PAs I–III (ha)	PAs I–III % FA in country	PAs I–III % total FA	PAs I–VIII (ha)	PAs I– VIII % FA in country	PAs I– VIII % total FA
Tanzania, United	499,139	3.12	57,914	11.60	0.36	166,937	33.44	1.05
Uganda	221,292	1.39	29,457	13.31	0.18	84,490	38.18	0.53
Zaire	5,948,749	37.24	468,494	7.88	2.93	468,494	7.88	2.93
Forest Total	15,973,866	100.00	949,592		5.94	3,225,710		20.19
Forest Code 122								
Burundi	238	0.00	0	0.00	0.00	238	100.00	0.00
Cameroon	14,798,912	8.74	138,027	0.93	0.08	1,086,042	7.34	0.64
Central African Republic	4,722,601	2.79	101,483	2.15	0.06	416,214	8.81	0.25
Congo	17,223,050	10.17	131,689	0.76	0.08	660,459	3.83	0.39
Cote d'Ivoire	2,670,007	1.58	497,913	18.65	0.29	547,753	20.52	0.32
Equatorial Guinea	825,338	0.49	0	0.00	0.00	0	0.00	0.00
Gabon	22,488,644	13.28	9,949	0.04	0.01	1,365,405	6.07	0.81
Ghana	1,584,914	0.94	30,885	1.95	0.02	79,296	5.00	0.05
Guinea	448,195	0.26	92,537	20.65	0.05	190,308	42.46	0.11
Guinea–Bissau	518,146	0.31	0	0.00	0.00	0	0.00	0.00
Kenya	258,147	0.15	22,612	8.76	0.01	89,862	34.81	0.05
Liberia	4,117,686	2.43	93,330	2.27	0.06	93,330	2.27	0.06
Madagascar	2,581,697	1.52	128,321	4.97	0.08	137,371	5.32	0.08
Nigeria	2,786,943	1.65	302,678	10.86	0.18	338,432	12.14	0.20
Senegal	20,068	0.01	654	3.26	0.00	654	3.26	0.00
Sierra Leone	392,509	0.23	0	0.00	0.00	73,951	18.84	0.04
Sao Tome and Principe	22,312	0.01	0	0.00	0.00	0	0.00	0.00
Tanzania, United	1,113,821	0.66	116,801	10.49	0.07	214,447	19.25	0.13
Togo	135,444	0.08	145	0.11	0.00	145	0.11	0.00
Uganda	631,807	0.37	36,280	5.74	0.02	88,259	13.97	0.05
Zaire	91,973,021	54.32	5,718,397	6.22	3.38	6,278,461	6.83	3.71
Forest Total	169,313,505	100.00	7,421,701		4.38	11,660,627		6.89
Forest Code 130								
Benin	23,360	0.25	0	0.00	0.00	4,356	18.65	0.05
Equatorial Guinea	793,242	8.38	0	0.00	0.00	0	0.00	0.00
Zaire	8,652,320	91.38	108,609	1.26	1.15	143,694	1.66	1.52
Forest Total	9,468,922	100.00	108,609		1.15	148,050		1.56
Forest Code 800								
Ghana	8,553	100.00	0	0.00	0.00	0	0.00	0.00
Forest Total	8,553	100.00	0		0.00	0		0.00

Annex 3
MOIST FOREST PROTECTION IN TROPICAL COUNTRIES OF AFRICA

	Forest Area (FA) (ha)	FA % total FA	PAs I–III (ha)	PAs I–III % FA in country	PAs I–III % total FA	PAs I–VIII (ha)	PAs I– VIII % FA in country	PAs I– VIII % total FA
Forest Code 888								
Ghana	73,840	9.42	0	0.00	0.00	1,999	2.71	0.26
Nigeria	708,940	90.49	7,124	1.00	0.91	10,319	1.46	1.32
Zaire	691	0.09	0	0.00	0.00	0	0.00	0.00
Forest Total	783,471	100.00	7,124		0.91	12,318		1.57
Forest Code 900								
Benin	11,547,512	1.58	863,102	7.47	0.12	2,751,672	23.83	0.38
Burundi	2,464,377	0.34	0	0.00	0.00	60,893	2.47	0.01
Cameroon	30,841,894	4.23	968,187	3.14	0.13	1,041,211	3.38	0.14
Central African Republic	57,015,792	7.82	1,829,436	3.21	0.25	5,848,501	10.26	0.80
Chad	16,838	0.00	4	0.02	0.00	1,686	10.01	0.00
Congo	10,481,389	1.44	0	0.00	0.00	457,600	4.37	0.06
Cote d'Ivoire	29,164,702	4.00	1,438,222	4.93	0.20	1,510,990	5.18	0.21
Djibouti	3	0.00	0	0.00	0.00	0	0.00	0.00
Equatorial Guinea	976,092	0.13	0	0.00	0.00	0	0.00	0.00
Eritrea	11,148,653	1.53	0	0.00	0.00	592,404	5.31	0.08
Ethiopia	107,947,609	14.80	2,338,292	2.17	0.32	18,474,746	17.11	2.53
Gabon	2,722,689	0.37	0	0.00	0.00	396,843	14.58	0.05
Gambia	964,456	0.13	14,661	1.52	0.00	25,170	2.61	0.00
Ghana	21,398,049	2.93	1,147,721	5.36	0.16	1,454,890	6.80	0.20
Guinea	23,772,097	3.26	31,373	0.13	0.00	795,104	3.34	0.11
Guinea–Bissau	2,435,299	0.33	0	0.00	0.00	0	0.00	0.00
Kenya	55,347,708	7.59	3,163,643	5.72	0.43	6,136,722	11.09	0.84
Liberia	5,486,552	0.75	3,207	0.06	0.00	3,207	0.06	0.00
Madagascar	53,860,872	7.38	476,148	0.88	0.07	832,947	1.55	0.11
Nigeria	85,310,937	11.70	1,831,982	2.15	0.25	2,685,894	3.15	0.37
Rwanda	2,237,625	0.31	252,115	11.27	0.03	252,263	11.27	0.03
Senegal	19,220,917	2.64	850,252	4.42	0.12	2,145,083	11.16	0.29
Sierra Leone	6,698,420	0.92	0	0.00	0.00	134,626	2.01	0.02
Sao Tome and Principe	71,640	0.01	0	0.00	0.00	0	0.00	0.00
Tanzania, United	87,238,752	11.96	3,806,890	4.36	0.52	13,497,272	15.47	1.85
Togo	5,590,940	0.77	339,151	6.07	0.05	515,310	9.22	0.07
Uganda	19,708,779	2.70	842,045	4.27	0.12	4,738,018	24.04	0.65
Zaire	75,608,643	10.37	964,283	1.28	0.13	4,843,875	6.41	0.66
Zambia	1	0.00	0	0.00	0.00	0	0.00	0.00
Forest Total	729,410,716	100.00	21,161,398		2.90	69,212,406		9.49

Annex 3
MOIST FOREST PROTECTION IN TROPICAL COUNTRIES OF AFRICA

	Forest Area (FA) (ha)	FA % total FA	PAs I–III (ha)	PAs I–III % FA in country	PAs I–III % total FA	PAs I–VIII (ha)	PAs I– VIII % FA in country	PAs I– VIII % total FA
Forest Code 999								
Burundi	2	0.00	0	0.00	0.00	0	0.00	0.00
Cameroon	16,410	0.05	0	0.00	0.00	0	0.00	0.00
Comoros	168,934	0.49	0	0.00	0.00	0	0.00	0.00
Ghana	84,458	0.24	0	0.00	0.00	1,679	1.99	0.00
Zaire	34,174,715	99.10	2,164,757	6.33	6.28	2,304,909	6.74	6.68
Zambia	5	0.00	0	0.00	0.00	0	0.00	0.00
Forest Total	34,483,670	100.00	2,164,757		6.28	2,306,588		6.69

Annex 4
NATIONAL PROTECTION OF MOIST FORESTS IN TROPICAL AFRICA

	Forest Area (FA) (ha)	FA % country area	PAs I–III (ha)	PAs I–III % FA in country	PAs I–VIII (ha)	PAs I–VIII % FA in country
Benin, Republic of						
10	27,551	0.24	0	0.00	12	0.04
111	7,103	0.06	0	0.00	0	0.00
130	23,360	0.20	0	0.00	4,356	18.65
900	11,547,512	99.50	863,102	7.47	2,751,672	23.83
County Total	11,605,526	100.00	863,102	7.44	2,756,040	23.75
Burundi, Republic of						
10	208,731	7.69	0	0.00	1,366	0.65
121	41,179	1.52	0	0.00	36,361	88.30
122	238	0.01	0	0.00	238	100.00
900	2,464,377	90.78	0	0.00	60,893	2.47
999	2	0.00	0	0.00	0	0.00
County Total	2,714,527	100.00	0	0.00	98,858	3.64
Cameroon						
10	347,135	0.74	13,083	3.77	13,731	3.96
111	244,549	0.52	0	0.00	19,800	8.10
113	221,160	0.47	0	0.00	0	0.00
121	320,093	0.68	504	0.16	637	0.20
122	14,798,912	31.63	138,027	0.93	1,086,042	7.34
900	30,841,894	65.92	968,187	3.14	1,041,211	3.38
999	16,410	0.04	0	0.00	0	0.00
County Total	46,790,153	100.00	1,119,801	2.39	2,161,421	4.62
Central African Republic						
10	68,632	0.11	0	0.00	3,101	4.52
113	479,707	0.77	11,591	2.42	31,387	6.54
122	4,722,601	7.57	101,483	2.15	416,214	8.81
900	57,015,792	91.36	1,829,436	3.21	5,848,501	10.26
County Total	62,286,732	100.00	1,942,510	3.12	6,299,203	10.11
Congo, Peoples Republic of the						
10	367,950	1.07	0	0.00	43	0.01
113	6,252,100	18.21	0	0.00	0	0.00
122	17,223,050	50.17	131,689	0.76	660,459	3.83
900	10,481,389	30.53	0	0.00	457,600	4.37
County Total	34,324,489	100.00	131,689	0.38	1,118,102	3.26

Annex 4
NATIONAL PROTECTION OF MOIST FORESTS IN TROPICAL AFRICA

	Forest Area (FA) (ha)	FA % country area	PAs I–III (ha)	PAs I–III % FA in country	PAs I–VIII (ha)	PAs I–VIII % FA in country
Cote d'Ivoire, Republic of						
10	284,049	0.88	0	0.00	414	0.15
111	2,911	0.01	1,468	50.43	1,468	50.43
113	40,746	0.13	377	0.93	377	0.93
121	13,799	0.04	2,375	17.21	2,375	17.21
122	2,670,007	8.26	497,913	18.65	547,753	20.52
900	29,164,702	90.25	1,438,222	4.93	1,510,990	5.18
County Total	32,176,214	100.00	1,958,653	6.09	2,081,675	6.47
Equatorial Guinea, Republic of						
10	13,457	0.50	0	0.00	0	0.00
111	25,684	0.96	0	0.00	0	0.00
121	54,639	2.03	0	0.00	0	0.00
122	825,338	30.72	0	0.00	0	0.00
130	793,242	29.53	0	0.00	0	0.00
900	976,092	36.33	0	0.00	0	0.00
County Total	2,688,452	100.00	0	0.00	0	0.00
Eritrea						
121	89,243	0.74	0	0.00	0	0.00
900	11,148,653	92.30	0	0.00	592,404	5.31
County Total	11,237,896	100.00	0	0.00	592,404	5.27
Ethiopia						
10	753,191	0.66	48,468	6.44	63,828	8.47
121	4,636,303	4.09	138,426	2.99	1,246,271	26.88
900	107,947,609	95.22	2,338,292	2.17	18,474,746	17.11
County Total	113,337,103	100.00	2,525,186	2.23	19,784,845	17.46
Gabonese Republic						
10	48,468	0.18	37	0.08	13,465	27.78
111	619,662	2.33	0	0.00	36,004	5.81
113	400,893	1.51	0	0.00	0	0.00
122	22,488,644	84.72	9,949	0.04	1,365,405	6.07
900	2,722,689	10.26	0	0.00	396,843	14.58
County Total	26,280,356	100.00	9,986	0.04	1,875,160	7.14
Gambia, Republic of the						
10	2,185	0.20	0	0.00	0	0.00

Annex 4
NATIONAL PROTECTION OF MOIST FORESTS IN TROPICAL AFRICA

	Forest Area (FA) (ha)	FA % country area	PAs I–III (ha)	PAs I–III % FA in country	PAs I–VIII (ha)	PAs I–VIII % FA in country
111	51,330	4.78	1,243	2.42	2,438	4.75
900	964,456	89.83	14,661	1.52	25,170	2.61
County Total	1,017,971	100.00	17,110	1.68	32,588	3.20
Ghana, Republic of						
10	58,792	0.25	3,989	6.78	3,989	6.78
111	334	0.00	0	0.00	0	0.00
122	1,584,914	6.61	30,885	1.95	79,296	5.00
800	8,553	0.04	0	0.00	0	0.00
888	73,840	0.31	0	0.00	1,999	2.71
900	21,398,049	89.30	1,147,721	5.36	1,454,890	6.80
999	84,458	0.35	0	0.00	1,679	1.99
County Total	23,208,940	100.00	1,182,595	5.10	1,541,853	6.64
Guinea, Republic of						
10	3,865	0.02	0	0.00	70	1.81
111	296,194	1.21	0	0.00	162	0.05
121	20,974	0.09	4,436	21.15	4,436	21.15
122	448,195	1.82	92,537	20.65	190,308	42.46
900	23,772,097	96.77	31,373	0.13	795,104	3.34
County Total	24,541,325	100.00	128,346	0.52	990,080	4.03
Guinea–Bissau, Republic of						
10	790	0.02	0	0.00	0	0.00
111	318,761	9.42	0	0.00	0	0.00
122	518,146	15.32	0	0.00	0	0.00
900	2,435,299	71.99	0	0.00	0	0.00
County Total	3,272,996	100.00	0	0.00	0	0.00
Kenya, Republic of						
10	1,198,526	2.05	9,953	0.83	12,126	1.01
121	1,656,072	2.83	96,515	5.83	912,522	55.10
122	258,147	0.44	22,612	8.76	89,862	34.81
900	55,347,708	94.57	3,163,643	5.72	6,136,722	11.09
County Total	58,460,453	100.00	3,292,728	5.63	7,151,250	12.23
Liberia, Republic of						
10	19,647	0.20	0	0.00	0	0.00
111	631	0.01	0	0.00	0	0.00

Annex 4
NATIONAL PROTECTION OF MOIST FORESTS IN TROPICAL AFRICA

	Forest Area (FA) (ha)	FA % country area	PAs I–III (ha)	PAs I–III % FA in country	PAs I–VIII (ha)	PAs I–VIII % FA in country
121	5,464	0.06	0	0.00	0	0.00
122	4,117,686	42.73	93,330	2.27	93,330	2.27
900	5,486,552	56.94	3,207	0.06	3,207	0.06
County Total	9,629,980	100.00	96,537	1.00	96,537	1.00
Madagascar, Democratic Republic of						
10	160,467	0.27	2,385	1.49	8,761	5.46
111	331,474	0.56	0	0.00	574	0.17
121	2,296,034	3.87	126,158	5.49	144,865	6.31
122	2,581,697	4.35	128,321	4.97	137,371	5.32
900	53,860,872	90.80	476,148	0.88	832,947	1.55
County Total	59,230,544	100.00	733,012	1.24	1,124,518	1.90
Nigeria, Federal Republic of						
10	895,300	0.98	20,580	2.30	20,921	2.34
111	1,046,432	1.15	0	0.00	2,526	0.24
122	2,786,943	3.06	302,678	10.86	338,432	12.14
888	708,940	0.78	7,124	1.00	10,319	1.46
900	85,310,937	93.55	1,831,982	2.15	2,685,894	3.15
County Total	90,748,552	100.00	2,162,364	2.38	3,064,517	3.38
Rwandese Republic						
10	144,511	5.70	0	0.00	0	0.00
121	155,229	6.12	25,313	16.31	155,010	99.86
900	2,237,625	88.19	252,115	11.27	252,263	11.27
County Total	2,537,365	100.00	277,428	10.93	407,273	16.05
Senegal, Republic of						
10	83,326	0.42	5,123	6.15	5,732	6.88
111	157,574	0.80	4,505	2.86	4,505	2.86
122	20,068	0.10	654	3.26	654	3.26
900	19,220,917	97.54	850,252	4.42	2,145,083	11.16
County Total	19,481,885	100.00	880,836	4.52	2,176,276	11.17
Sierra Leone, Republic of						
10	39,353	0.54	0	0.00	0	0.00
111	101,505	1.40	0	0.00	1,672	1.65
113	4,269	0.06	0	0.00	0	0.00
121	8,138	0.11	0	0.00	3,312	40.70

Annex 4
NATIONAL PROTECTION OF MOIST FORESTS IN TROPICAL AFRICA

	Forest Area (FA) (ha)	FA % country area	PAs I–III (ha)	PAs I–III % FA in country	PAs I–VIII (ha)	PAs I–VIII % FA in country
122	392,509	5.41	0	0.00	73,951	18.84
900	6,698,420	92.28	0	0.00	134,626	2.01
County Total	7,244,194	100.00	0	0.00	213,562	2.95
Tanzania, United Republic of						
10	5,486,932	5.82	71,669	1.31	317,322	5.78
111	197,371	0.21	0	0.00	834	0.42
113	2,131	0.00	0	0.00	0	0.00
121	499,139	0.53	57,914	11.60	166,937	33.44
122	1,113,821	1.18	116,801	10.49	214,447	19.25
900	87,238,752	92.57	3,806,890	4.36	13,497,272	15.47
County Total	94,538,146	100.00	4,053,274	4.29	14,196,812	15.02
Togolese Republic						
10	6,973	0.12	0	0.00	0	0.00
122	135,444	2.36	145	0.11	145	0.11
900	5,590,940	97.52	339,151	6.07	515,310	9.22
County Total	5,733,357	100.00	339,296	5.92	515,455	8.99
Uganda, Republic of						
10	3,595,823	14.87	38,982	1.08	45,190	1.26
113	24,402	0.10	258	1.06	3,327	13.63
121	221,292	0.92	29,457	13.31	84,490	38.18
122	631,807	2.61	36,280	5.74	88,259	13.97
900	19,708,779	81.50	842,045	4.27	4,738,018	24.04
County Total	24,182,103	100.00	947,022	3.92	4,959,284	20.51
Zaire, Republic of						
10	4,933,651	2.11	93,177	1.89	94,164	1.91
111	22,250	0.01	0	0.00	0	0.00
113	12,473,943	5.34	216,021	1.73	216,021	1.73
121	5,948,749	2.54	468,494	7.88	468,494	7.88
122	91,973,021	39.34	5,718,397	6.22	6,278,461	6.83
130	8,652,320	3.70	108,609	1.26	143,694	1.66
888	691	0.00	0	0.00	0	0.00
900	75,608,643	32.34	964,283	1.28	4,843,875	6.41
999	34,174,715	14.62	2,164,757	6.33	2,304,909	6.74
County Total	233,787,983	100.00	9,733,738	4.16	14,349,618	6.14

Annex 5
ECOFLORISTIC ZONE PROTECTION IN TROPICAL COUNTRIES OF SOUTH AND SOUTH-EAST ASIA

	EFZ area (ha)	EFZ area % total EFZ area	PAs I–III (ha)	PAs I–III % EFZ in country	PAs I–III % total EFZ	PAs I–VIII (ha)	PAs I–VIII % EFZ in country	PAs I– VIII % total EFZ
EFZ CODE 3								
Malaysia	12,644,419	83.81	428,694	3.39	2.84	472,059	3.73	3.13
Thailand	2,443,193	16.19	41,138	1.68	0.27	153,176	6.27	1.02
EFZ Total	15,087,612	100.00	469,832		3.11	625,235		4.14
EFZ CODE 4								
Cambodia	14,141	0.56	0	0.00	0.00	0	0.00	0.00
Myanmar	964,268	38.29	273	0.03	0.01	273	0.03	0.01
Thailand	74,004	2.94	22,586	30.52	0.90	22,586	30.52	0.90
Viet Nam	1,156,907	45.94	8,772	0.76	0.35	14,287	1.23	0.57
EFZ Total	2,518,312	100.00	31,631		1.26	37,146		1.48
EFZ CODE 5								
Bangladesh	4,724,502	7.46	0	0.00	0.00	6	0.00	0.00
Bhutan	336,367	0.53	44,007	13.08	0.07	73,670	21.90	0.12
India	11,190,239	17.67	40,759	0.36	0.06	94,545	0.84	0.15
Cambodia	1,997,729	3.15	369,854	18.51	0.58	854,625	42.78	1.35
Lao People's Democratic	5,582,419	8.81	0	0.00	0.00	724,618	12.98	1.14
Myanmar	21,839,575	34.48	4,504	0.02	0.01	4,504	0.02	0.01
Nepal	1,992,271	3.15	77,480	3.89	0.12	144,297	7.24	0.23
Thailand	10,316,534	16.29	874,069	8.47	1.38	1,357,966	13.16	2.14
Viet Nam	5,361,732	8.46	43,606	0.81	0.07	213,190	3.98	0.34
EFZ Total	63,341,368	100.00	1,454,279		2.30	3,467,421		5.47
EFZ CODE 6								
India	1,290,954	41.30	0	0.00	0.00	42,938	3.33	1.37
Sri Lanka	1,834,820	58.70	85,558	4.66	2.74	165,470	9.02	5.29
EFZ Total	3,125,774	100.00	85,558		2.74	208,408		6.67
EFZ CODE 7								
Viet Nam	948,233	100.00	0	0.00	0.00	2,256	0.24	0.24
EFZ Total	948,233	100.00	0		0.00	2,256		0.24
EFZ CODE 8								
India	57,591,171	100.00	47,418	0.08	0.08	923,930	1.60	1.60
EFZ Total	57,591,171	100.00	47,418		0.08	923,930		1.60
EFZ CODE 9								
India	52,296,716	91.54	72,238	0.14	0.13	508,872	0.97	0.89

Annex 5
ECOFLORISTIC ZONE PROTECTION IN TROPICAL COUNTRIES OF SOUTH AND SOUTH–EAST ASIA

	EFZ area (ha)	EFZ area % total EFZ area	PAs I–III (ha)	PAs I–III % EFZ in country	PAs I–III % total EFZ	PAs I–VIII (ha)	PAs I–VIII % EFZ in country	PAs I– VIII % total EFZ
Pakistan	4,831,431	8.46	3,992	0.08	0.01	3,992	0.08	0.01
EFZ Total	57,128,147	100.00	76,230		0.13	512,864		0.90
EFZ CODE 10								
India	709,838	44.45	0	0.00	0.00	0	0.00	0.00
Lao People's Democratic	15,672	0.98	0	0.00	0.00	0	0.00	0.00
Myanmer	364,221	22.81	0	0.00	0.00	0	0.00	0.00
Viet Nam	507,274	31.76	0	0.00	0.00	67,267	13.26	4.21
EFZ Total	1,597,043	100.00	0		0.00	67,267		4.21
EFZ CODE 11								
Bhutan	1,634,137	38.75	221,682	13.57	5.26	308,964	18.91	7.33
India	204,530	4.85	0	0.00	0.00	0	0.00	0.00
Myanmar	1,579,244	37.45	0	0.00	0.00	0	0.00	0.00
Nepal	798,875	18.95	52,310	6.55	1.24	107,822	13.50	2.56
EFZ Total	4,216,786	100.00	273,992		6.50	416,786		9.88
EFZ CODE 12								
India	181,252	73.84	726	0.40	0.30	726	0.40	0.30
Nepal	64,215	26.16	0	0.00	0.00	0	0.00	0.00
EFZ Total	245,467	100.00	726		0.30	726		0.30
EFZ CODE 13								
India	3,807,239	59.87	56,676	1.49	0.89	105,237	2.76	1.65
Nepal	1,240,094	19.50	0	0.00	0.00	235,938	19.03	3.71
Pakistan	1,312,147	20.63	0	0.00	0.00	0	0.00	0.00
EFZ Total	6,359,480	100.00	56,676		0.89	341,175		5.36
EFZ CODE 14								
Viet Nam	119,088	100.00	0	0.00	0.00	0	0.00	0.00
EFZ Total	119,088	100.00	0		0.00	0		0.00
EFZ CODE 15								
India	5,022,029	100.00	0	0.00	0.00	69,705	1.39	1.39
EFZ Total	5,022,029	100.00	0		0.00	69,705		1.39
EFZ CODE 16								
Cambodia	11,052,889	25.94	17,867	0.16	0.04	1,659,095	15.01	3.89
Lao People's Democratic	3,707,965	8.70	0	0.00	0.00	233,502	6.30	0.55

Annex 5
ECOFLORISTIC ZONE PROTECTION IN TROPICAL COUNTRIES OF SOUTH AND SOUTH–EAST ASIA

	EFZ area (ha)	EFZ area % total EFZ area	PAs I–III (ha)	PAs I–III % EFZ in country	PAs I–III % total EFZ	PAs I–VIII (ha)	PAs I–VIII % EFZ in country	PAs I– VIII % total EFZ
Myanmar	4,147	0.01	30	0.72	0.00	30	0.72	0.00
Thailand	24,366,044	57.19	1,013,045	4.16	2.38	1,298,392	5.33	3.05
Viet Nam	3,474,059	8.15	105,560	3.04	0.25	324,807	9.35	0.76
EFZ Total	42,605,122	100.00	1,136,502		2.67	3,515,826		8.25
EFZ CODE 17								
Myanmar	5,943,056	100.00	26,291	0.44	0.44	26,291	0.44	0.44
EFZ Total	5,943,056	100.00	26,291		0.44	26,291		0.44
EFZ CODE 18								
India	82,222,676	99.84	453,278	0.55	0.55	2,112,328	2.57	2.56
Nepal	135,882	0.16	0	0.00	0.00	0	0.00	0.00
EFZ Total	82,358,558	100.00	453,278		0.55	2,112,328		2.56
EFZ CODE 19								
India	4,907,115	69.93	0	0.00	0.00	61,252	1.25	0.87
Sri Lanka	2,110,048	30.07	312,611	14.82	4.45	372,370	17.65	5.31
EFZ Total	7,017,163	100.00	312,611		4.45	433,622		6.18
EFZ CODE 20								
India	781,244	53.42	0	0.00	0.00	2,467	0.32	0.17
Pakistan	681,279	46.58	0	0.00	0.00	16,415	2.41	1.12
EFZ Total	1,462,523	100.00	0		0.00	18,882		1.29
EFZ CODE 21								
Pakistan	18,563,186	100.00	0	0.00	0.00	21,538	0.12	0.12
EFZ Total	18,563,186	100.00	0		0.00	21,538		0.12
EFZ CODE 22								
India	20,144,709	46.84	265,564	1.32	0.62	391,174	1.94	0.91
Pakistan	22,867,249	53.16	652,060	2.85	1.52	652,060	2.85	1.52
EFZ Total	43,011,958	100.00	917,624		2.13	1,043,234		2.43
EFZ CODE 23								
Pakistan	3,187,659	100.00	0	0.00	0.00	58,805	1.84	1.84
EFZ Total	3,187,659	100.00	0		0.00	58,805		1.84
EFZ CODE 24								
India	2,463,654	3.63	0	0.00	0.00	45,077	1.83	0.07

Annex 5
ECOFLORISTIC ZONE PROTECTION IN TROPICAL COUNTRIES OF SOUTH AND SOUTH–EAST ASIA

	EFZ area (ha)	EFZ area % total EFZ area	PAs I–III (ha)	PAs I–III % EFZ in country	PAs I–III % total EFZ	PAs I–VIII (ha)	PAs I–VIII % EFZ in country	PAs I– VIII % total EFZ
Cambodia	4,796,302	7.06	374,844	7.82	0.55	870,105	18.14	1.28
Lao People's Democratic	7,591,364	11.17	0	0.00	0.00	654,500	8.62	0.96
Srl Lanka	2,396,791	3.53	95,239	3.97	0.14	299,772	12.51	0.44
Myanmar	25,900,018	38.12	123,395	0.48	0.18	138,321	0.53	0.20
Thalland	8,346,927	12.28	467,966	5.61	0.69	1,622,084	19.43	2.39
Viet Nam	16,454,477	24.22	133,132	0.81	0.20	408,373	2.48	0.60
EFZ Total	67,950,180	100.00	1,194,576		1.76	4,038,232		5.94
EFZ CODE 25								
Indla	5,954,135	67.16	53,060	0.89	0.60	107,609	1.81	1.21
Nepal	2,537,498	28.62	113,054	4.46	1.28	150,061	5.91	1.69
Pakistan	373,437	4.21	0	0.00	0.00	0	0.00	0.00
EFZ Total	8,865,070	100.00	166,114		1.87	257,670		2.91
EFZ CODE 26								
Indla	390,536	100.00	0	0.00	0.00	1,037	0.27	0.27
EFZ Total	390,536	100.00	0		0.00	1,037		0.27
EFZ CODE 27								
India	3,529,288	100.00	6,201	0.18	0.18	109,049	3.09	3.09
EFZ Total	3,529,288	100.00	6,201		0.18	109,049		3.09
EFZ CODE 28								
Bangladesh	8,533,031	23.83	0	0.00	0.00	13,087	0.15	0.04
Indla	26,738,838	74.68	271,672	1.02	0.76	443,868	1.66	1.24
Nepal	533,335	1.49	14,102	2.64	0.04	15,329	2.87	0.04
EFZ Total	35,805,204	100.00	285,774		0.80	472,284		1.32
EFZ CODE 29								
Cambodia	277,874	100.00	0	0.00	0.00	0	0.00	0.00
EFZ Total	277,874	100.00	0		0.00	0		0.00
EFZ CODE 30								
Indla	5,619,953	17.67	106,310	1.89	0.33	106,310	1.89	0.33
Pakistan	26,191,254	82.33	0	0.00	0.00	7,257	0.03	0.02
EFZ Total	31,811,207	100.00	106,310		0.33	113,567		0.36

Annex 5
ECOFLORISTIC ZONE PROTECTION IN TROPICAL COUNTRIES OF SOUTH AND SOUTH–EAST ASIA

	EFZ area (ha)	EFZ area % total EFZ area	PAs I–III (ha)	PAs I–III % EFZ in country	PAs I–III % total EFZ	PAs I–VIII (ha)	PAs I–VIII % EFZ in country	PAs I– VIII % total EFZ
EFZ CODE 31								
Pakistan	375,026	100.00	0	0.00	0.00	0	0.00	0.00
EFZ Total	375,026	100.00	0		0.00	0		0.00
EFZ CODE 32								
Malaysia	34,107	100.00	17,353	50.88	50.88	17,353	50.88	50.88
EFZ Total	34,107	100.00	17,353		50.88	17,353		50.88
EFZ CODE 33								
Malaysia	558,642	100.00	13,874	2.48	2.48	56,526	10.12	10.12
EFZ Total	558,642	100.00	13,874		2.48	56,526		10.12
EFZ CODE 34								
Bangladesh	37	0.00	0	0.00	0.00	0	0.00	0.00
India	761,632	3.15	0	0.00	0.00	0	0.00	0.00
Cambodia	99,210	0.41	0	0.00	0.00	18,458	18.60	0.08
Lao People's Democratic	6,332,864	26.19	0	0.00	0.00	536,220	8.47	2.22
Myanmar	10,443,654	43.19	0	0.00	0.00	0	0.00	0.00
Thailand	2,309,709	9.55	252,562	10.93	1.04	627,225	27.16	2.59
Viet Nam	4,038,451	16.70	0	0.00	0.00	354,200	8.77	1.46
EFZ Total	23,985,557	100.00	252,562		1.04	1,536,103		6.35
EFZ CODE 35								
Bhutan	940,936	11.43	130,657	13.89	1.59	139,910	14.87	1.70
India	2,443,973	29.68	61,369	2.51	0.75	65,117	2.66	0.79
Myanmar	3,360,063	40.80	0	0.00	0.00	0	0.00	0.00
Nepal	1,489,472	18.09	1,615	0.11	0.02	47,089	3.16	0.57
EFZ Total	8,234,444	100.00	193,641		2.35	252,116		3.06
EFZ CODE 36								
Sri Lanka	16,043	100.00	0	0.00	0.00	0	0.00	0.00
EFZ Total	16,043	100.00	0		0.00	0		0.00
EFZ CODE 37								
India	368,918	62.10	0	0.00	0.00	8,023	2.17	1.35
Sri Lanka	225,199	37.90	9	0.00	0.00	15,684	6.96	2.64
EFZ Total	594,117	100.00	9		0.00	23,707		3.99

Annex 5
ECOFLORISTIC ZONE PROTECTION IN TROPICAL COUNTRIES OF SOUTH AND SOUTH–EAST ASIA

	EFZ area (ha)	EFZ area % total EFZ area	PAs I–III (ha)	PAs I–III % EFZ in country	PAs I–III % total EFZ	PAs I–VIII (ha)	PAs I–VIII % EFZ in country	PAs I– VIII % total EFZ
EFZ CODE 38								
India	3,209,742	65.00	3,818	0.12	0.08	39,242	1.22	0.79
Nepal	1,145,065	23.19	0	0.00	0.00	23,454	2.05	0.47
Pakistan	583,132	11.81	0	0.00	0.00	0	0.00	0.00
EFZ Total	4,937,939	100.00	3,818		0.08	62,696		1.27
EFZ CODE 39								
India	53,122	7.09	0	0.00	0.00	0	0.00	0.00
Nepal	578,507	77.16	22,763	3.93	3.04	22,763	3.93	3.04
Pakistan	118,092	15.75	0	0.00	0.00	7,018	5.94	0.94
EFZ Total	749,721	100.00	22,763		3.04	29,781		3.97
EFZ CODE 40								
Bhutan	1,062,702	46.30	387,733	36.49	16.89	525,266	49.43	22.89
India	356,502	15.53	0	0.00	0.00	0	0.00	0.00
Myanmar	106,743	4.65	0	0.00	0.00	0	0.00	0.00
Nepal	769,236	33.52	350,018	45.50	15.25	359,762	46.77	15.67
EFZ Total	2,295,183	100.00	737,751		32.14	885,028		38.56
EFZ CODE 41								
India	14,380,132	54.19	82,017	0.57	0.31	102,431	0.71	0.39
Nepal	3,453,503	13.01	375,511	10.87	1.42	991,966	28.72	3.74
Pakistan	8,701,885	32.79	112,320	1.29	0.42	112,320	1.29	0.42
EFZ Total	26,535,520	100.00	569,848		2.15	1,206,717		4.55
Regional Totals	641,087,799		11,622,321			22,965,311		3.58

Annex 6
NATIONAL PROTECTION OF ECOFLORISTIC ZONES IN SOUTH AND SOUTH–EAST ASIA

EFZ code	EFZ area (ha)	EFZ area % country area	PAs I–III (ha)	PAs I–III % country area	PAs I–VIII (ha)	PAs I– VIII % country area
Bangladesh			0			
5	4,724,502	35.64	0	0.00	6	0.00
28	8,533,031	64.36	0	0.00	13,087	0.10
34	37	0.00	0	0.00	0	0.00
Country Total	13,257,570		0	0.00	13,093	0.10
Bhutan						
5	336367	8.464	44007	13.08	73670	21.9
11	1634137	41.12	221682	13.57	308964	15.68
35	940936	23.677	130657	13.89	139910	4.806
40	1062702	26.741	387733	36.49	525266	13.22
Country Total	3974142		784079	19.73	1047810	26.37
Cambodia						
4	14,141	0.08	0	0.00	0	0.00
5	1,997,729	10.95	369,854	18.51	854,625	42.48
16	11,052,889	60.60	17,867	0.16	1,659,095	12.70
24	4,796,302	26.30	374,844	7.82	870,105	4.87
29	277,874	1.52	0	0.00	0	0.00
34	99,210	0.54	0	0.00	18,458	0.10
Country Total	18,238,145		762,565	4.18	3,402,283	18.65
India						
5	11,190,239	3.65	40,759	0.36	94,545	0.84
6	1,290,954	0.42	0	0.00	42,938	0.34
8	57,591,171	18.78	47,418	0.08	923,930	1.32
9	52,296,716	17.06	72,238	0.14	508,872	0.42
10	709,838	0.23	0	0.00	0	0.00
11	204,530	0.07	0	0.00	0	0.00
12	181,252	0.06	726	0.40	726	0.00
13	3,807,239	1.24	56,676	1.49	105,237	0.08
15	5,022,029	1.64	0	0.00	69,705	0.05
18	82,222,676	26.82	453,278	0.55	2,112,328	0.98
19	4,907,115	1.60	0	0.00	61,252	0.03
20	781,244	0.25	0	0.00	2,467	0.00
22	20,144,709	6.57	265,564	1.32	391,174	0.16
24	2,463,654	0.80	0	0.00	45,077	0.02
25	5,954,135	1.94	53,060	0.89	107,609	0.04
26	390,536	0.13	0	0.00	1,037	0.00

Annex 6
NATIONAL PROTECTION OF ECOFLORISTIC ZONES IN SOUTH AND SOUTH–EAST ASIA

EFZ code	EFZ area (ha)	EFZ area % country area	PAs I–III (ha)	PAs I–III % country area	PAs I–VIII (ha)	PAs I– VIII % country area
27	3,529,288	1.15	6,201	0.18	109,049	0.04
28	26,738,838	8.72	271,672	1.02	443,868	0.16
30	5,619,953	1.83	106,310	1.89	106,310	0.04
34	761,632	0.25	0	0.00	0	0.00
35	2,443,973	0.80	61,369	2.51	65,117	0.02
37	368,918	0.12	0	0.00	8,023	0.00
38	3,209,742	1.05	3,818	0.12	39,242	0.01
39	53,122	0.02	0	0.00	0	0.00
40	356,502	0.12	0	0.00	0	0.00
41	14,380,132	4.69	82,017	0.57	102,431	0.03
Country Total	306,620,137		1,521,106	0.50	5,340,937	1.74
Lao People's Democratic Republic						
5	5,582,419	24.03	0	0.00	724,618	12.98
10	15,672	0.07	0	0.00	0	0.00
16	3,707,965	15.96	0	0.00	233,502	2.51
24	7,591,364	32.68	0	0.00	654,500	3.87
34	6,332,864	27.26	0	0.00	536,220	2.31
Country Total	23,230,284		0	0.00	2,148,840	9.25
Malaysia, West						
3	12,644,419	95.48	428,694	3.39	472,059	3.73
32	34,107	0.26	17,353	50.88	17,353	0.14
33	558,642	4.22	13,874	2.48	56,526	0.43
Country Total	13,237,168		459,921	57	545,938	4
Myanmar						
4	964,268	1.37	273	0.03	273	0.03
5	21,839,575	30.98	4,504	0.02	4,504	0.02
10	364,221	0.52	0	0.00	0	0.00
11	1,579,244	2.24	0	0.00	0	0.00
16	4,147	0.01	30	0.72	30	0.00
17	5,943,056	8.43	26,291	0.44	26,291	0.09
24	25,900,018	36.74	123,395	0.48	138,321	0.24
34	10,443,654	14.81	0	0.00	0	0.00
35	3,360,063	4.77	0	0.00	0	0.00
40	106,743	0.15	0	0.00	0	0.00
Country Total	70,504,989		154,493	0.22	169,419	0.24

Annex 6
NATIONAL PROTECTION OF ECOFLORISTIC ZONES IN SOUTH AND SOUTH–EAST ASIA

EFZ code	EFZ area (ha)	EFZ area % country area	PAs I–III (ha)	PAs I–III % country area	PAs I–VIII (ha)	PAs I– VIII % country area
Nepal						
5	1992271	13.518	77480	3.889	144297	7.243
11	798875	5.4206	52310	6.548	107822	3.863
12	64215	0.43571	0	0	0	0
13	1240094	8.4143	0	0	235938	5.761
18	135882	0.92199	0	0	0	0
25	2537498	17.218	113054	4.455	150061	2.217
28	533335	3.6188	14102	2.644	15329	0.2099
35	1469472	10.106	1615	0.1084	47089	0.5356
38	1145065	7.7695	0	0	23454	0.236
39	578507	3.9253	22763	3.935	22763	0.2165
40	769236	5.2194	350018	45.5	359762	3.188
41	3453503	23.433	375511	10.87	991966	6.731
Country Total	14737953		1006853	6.832	2098481	14.24
Pakistan						
9	4,831,431	5.50	3,992	0.08	3,992	0.08
13	1,312,147	1.49	0	0.00	0	0.00
20	681,279	0.78	0	0.00	16,415	0.24
21	18,563,186	21.15	0	0.00	21,538	0.08
22	22,867,249	26.05	652,060	2.85	652,060	1.35
23	3,187,659	3.63	0	0.00	58,805	0.11
25	373,437	0.43	0	0.00	0	0.00
30	26,191,254	29.84	0	0.00	7,257	0.01
31	375,026	0.43	0	0.00	0	0.00
38	583,132	0.66	0	0.00	0	0.00
39	118,092	0.13	0	0.00	7,018	0.01
41	8,701,885	9.91	112,320	1.29	112,320	0.13
Country Total	87,785,777		768,372	0.88	879,405	1.00
Sri Lanka						
6	1,834,820	27.87	85,558	4.66	165,470	9.02
19	2,110,048	32.05	312,611	14.82	372,370	9.44
24	2,396,791	36.41	95,239	3.97	299,772	4.73
36	16,043	0.24	0	0.00	0	0.00
37	225,199	3.42	9	0.00	15,684	0.24
Country Total	6,582,901		493,417	7.50	853,296	12.96

Annex 6
NATIONAL PROTECTION OF ECOFLORISTIC ZONES IN SOUTH AND SOUTH–EAST ASIA

EFZ code	EFZ area (ha)	EFZ area % country area	PAs I–III (ha)	PAs I–III % country area	PAs I–VIII (ha)	PAs I– VIII % country area
Thailand						
3	2,443,193	5.11	41,138	1.68	153,176	6.27
4	74,004	0.15	22,586	30.52	22,586	0.90
5	10,316,534	21.56	874,069	8.47	1,357,966	10.58
16	24,366,044	50.91	1,013,045	4.16	1,298,392	3.49
24	8,346,927	17.44	467,966	5.61	1,622,084	3.56
34	2,309,709	4.83	252,562	10.93	627,225	1.31
Country Total	47,856,411		2,671,366	5.58	5,081,429	10.62
Viet Nam						
4	1,156,907	3.61	8,772	0.76	14,287	1.23
5	5,361,732	16.72	43,606	0.81	213,190	3.27
7	948,233	2.96	0	0.00	2,256	0.03
10	507,274	1.58	0	0.00	67,267	0.84
14	119,088	0.37	0	0.00	0	0.00
16	3,474,059	10.84	105,560	3.04	324,807	2.81
24	16,454,477	51.32	133,132	0.81	408,373	1.46
34	4,038,451	12.60	0	0.00	354,200	1.10
Country Total	32,060,221		291,070	5	1,384,380	11

ANNEX 7
MOIST FOREST PROTECTION IN TROPICAL COUNTRIES OF SOUTH AND SOUTH–EAST ASIA

	Forest Area (FA) (ha)	FA % total FA	PAs I–III (ha)	PAs I–III % FA in country	PAs I–III % total FA	PAs I–VIII (ha)	PAs I– VIII % FA in country	PAs I– VIII % total FA
Forest Code 10								
Bangladesh	132,977	3.90	0	0.00	0.00	0	0.00	0.00
Cambodia	468,727	13.75	129	0.03	0.00	14,548	3.10	0.43
India	761,129	22.33	19,544	2.57	0.57	33,653	4.42	0.99
Lao People's Democratic	215,597	6.32	0	0.00	0.00	6,496	3.01	0.19
Malaysia	1,086	0.03	0	0.00	0.00	0	0.00	0.00
Myanmar	228,933	6.72	0	0.00	0.00	0	0.00	0.00
Srl Lanka	62,391	1.83	3,898	6.25	0.11	31,128	49.89	0.91
Thailand	1,482,450	43.49	12,771	0.86	0.37	13,048	0.88	0.38
Viet Nam	55,613	1.63	966	1.74	0.03	3,305	5.94	0.10
Forest Total	3,408,905	100.00	37,308		1.09	102,178		3.00
Forest Code 111								
Bangladesh	415,629	30.39	0	0.00	0.00	13,087	3.15	0.96
Cambodia	27,606	2.02	8,226	29.80	0.60	17,981	65.13	1.31
India	12,686	0.93	0	0.00	0.00	0	0.00	0.00
Malaysia	116,048	8.48	0	0.00	0.00	0	0.00	0.00
Myanmar	57,271	4.19	0	0.00	0.00	0	0.00	0.00
Thailand	573,833	41.95	15,111	2.63	1.10	15,111	2.63	1.10
Viet Nam	164,786	12.05	0	0.00	0.00	0	0.00	0.00
Forest Total	1,367,859	100.00	23,337		1.71	46,179		3.38
Forest Code 112								
Myanmar	299,876	100.00	0	0.00	0.00	0	0.00	0.00
Forest Total	299,876	100.00	0	0.00	100.00	0	0.00	100.00
Forest Code 113								
Cambodia	785,828	65.31	0	0.00	0.00	269,888	34.34	22.43
India	11,020	0.92	0	0.00	0.00	0	0.00	0.00
Malaysia	406,446	33.78	0	0.00	0.00	1,217	0.30	0.10
Forest Total	1,203,294	100.00	0		0.00	271,105		22.53
Forest Code 114								
Myanmar	17,483	100.00	0	0.00	0.00	0	0.00	0.00
Forest Total	17,483	100.00	0		0.00	0		0.00
Forest Code 121								
Cambodia	235,686	2.12	66,902	28.39	0.60	134,780	57.19	1.21
India	876,575	7.90	0	0.00	0.00	35,513	4.05	0.32

ANNEX 7
MOIST FOREST PROTECTION IN TROPICAL COUNTRIES OF SOUTH AND SOUTH–EAST ASIA

	Forest Area (FA) (ha)	FA % total FA	PAs I–III (ha)	PAs I–III % FA in country	PAs I–III % total FA	PAs I–VIII (ha)	PAs I– VIII % FA in country	PAs I– VIII % total FA
Lao People's Democratic	1,171,286	10.55	0	0.00	0.00	51,555	4.40	0.46
Malaysia	687,907	6.20	52,434	7.62	0.47	109,433	15.91	0.99
Myanmar	5,839,869	52.61	0	0.00	0.00	0	0.00	0.00
Sri Lanka	70,599	0.64	303	0.43	0.00	16,922	23.97	0.15
Thailand	1,466,285	13.21	172,907	11.79	1.56	490,089	33.42	4.42
Viet Nam	751,183	6.77	4,679	0.62	0.04	135,517	18.04	1.22
Forest Total	11,099,397	100.00	297,225		2.68	973,809		8.77
Forest Code 122								
Bangladesh	361,528	0.88	0	0.00	0.00	6	0.00	0.00
Bhutan	26	0.00	0	0.00	0.00	0	0.00	0.00
Cambodia	5,605,968	13.68	423,507	7.55	1.03	1,596,796	28.48	3.90
India	2,964,788	7.23	0	0.00	0.00	65,785	2.22	0.16
Lao People's Democratic	3,299,813	8.05	0	0.00	0.00	729,040	22.09	1.78
Malaysia	5,735,620	13.99	406,723	7.09	0.99	429,545	7.49	1.05
Myanmar	14,612,092	35.65	71	0.00	0.00	72	0.00	0.00
Sri Lanka	79,899	0.19	0	0.00	0.00	0	0.00	0.00
Thailand	5,520,772	13.47	1,063,775	19.27	2.60	2,206,834	39.97	5.38
Viet Nam	2,811,804	6.86	38,480	1.37	0.09	242,837	8.64	0.59
Forest Total	40,992,361	100.00	1,932,556		4.71	5,270,915		12.86
Forest Code 130								
Cambodia	1	0.00	1	100.00	0.00	1	100.00	0.00
Lao People's Democratic	5,817,278	77.16	0	0.00	0.00	333,560	5.73	4.42
Myanmar	1,701,707	22.57	0	0.00	0.00	0	0.00	0.00
Thailand	843	0.01	0	0.00	0.00	0	0.00	0.00
Viet Nam	19,778	0.26	0	0.00	0.00	0	0.00	0.00
Forest Total	7,539,620	100.00	1		0.00	333,561		4.42
Forest Code 210								
Cambodia	5,145	0.26	0	0.00	0.00	4,680	90.96	0.23
India	805,826	40.27	0	0.00	0.00	38,048	4.72	1.90
Lao People's Democratic	375,908	18.79	0	0.00	0.00	51,971	13.83	2.60
Myanmar	446,158	22.30	0	0.00	0.00	0	0.00	0.00
Sri Lanka	21,820	1.09	1,391	6.37	0.07	3,170	14.53	0.16
Thailand	202,361	10.11	65,625	32.43	3.28	124,647	61.60	6.23
Viet Nam	143,624	7.18	0	0.00	0.00	25,318	17.63	1.27
Forest Total	2,000,845	100.00	67,016		3.35	247,834		12.39

ANNEX 7
MOIST FOREST PROTECTION IN TROPICAL COUNTRIES OF SOUTH AND SOUTH–EAST ASIA

	Forest Area (FA) (ha)	FA % total FA	PAs I–III (ha)	PAs I–III % FA in country	PAs I–III % total FA	PAs I–VIII (ha)	PAs I– VIII % FA in country	PAs I– VIII % total FA
Forest Code 220								
Bangladesh	1,835,792	5.52	0	0.00	0.00	0	0.00	0.00
Bhutan	15,360	0.05	0	0.00	0.00	0	0.00	0.00
Cambodia	4,780,972	14.38	717	0.02	0.00	842,836	17.63	2.53
India	13,074,727	39.32	364,152	2.79	1.10	560,320	4.29	1.69
Lao People's Democratic	2,347,931	7.06	0	0.00	0.00	224,820	9.58	0.68
Myanmar	5,416,857	16.29	122,019	2.25	0.37	122,019	2.25	0.37
Nepal	6,678	0.02	0	0.00	0.00	2	0.03	0.00
Sri Lanka	1,088,656	3.27	259,697	23.85	0.78	355,947	32.70	1.07
Thailand	2,904,624	8.74	404,791	13.94	1.22	633,644	21.82	1.91
Viet Nam	1,779,226	5.35	45,663	2.57	0.14	87,840	4.94	0.26
Forest Total	33,250,902	100.00	1,197,039		3.60	2,827,428		8.50
Forest Code 230								
Myanmar	3,619,386	100.00	11,428	0.32	0.32	11,428	0.32	0.32
Forest Total	3,619,386	100.00	11,428		0.32	11,428		0.32
Forest Code 900								
Bangladesh	10,511,638	2.43	0	0.00	0.00	0	0.00	0.00
Bhutan	13,990	0.00	21	0.15	0.00	23	0.16	0.00
Cambodia	6,329,654	1.46	263,083	4.16	0.06	520,773	8.23	0.12
India	288,117,390	66.56	1,137,410	0.39	0.26	4,607,618	1.60	1.06
Lao People's Democratic	10,002,470	2.31	0	0.00	0.00	751,398	7.51	0.17
Malaysia	6,226,301	1.44	764	0.01	0.00	5,743	0.09	0.00
Myanmar	38,285,944	8.84	20,975	0.05	0.00	35,900	0.09	0.01
Nepal	5,590,340	1.29	5,550,976	99.30	1.28	5,550,978	99.30	1.28
Pakistan	6	0.00	0	0.00	0.00	0	0.00	0.00
Sri Lanka	5,259,536	1.21	228,128	4.34	0.05	446,129	8.48	0.10
Thailand	35,707,101	8.25	936,386	2.62	0.22	1,598,056	4.48	0.37
Viet Nam	26,346,211	6.09	208,300	0.79	0.05	896,581	3.40	0.21
Forest Total	432,896,831	100.00	8,346,043		1.93	14,413,199		3.33
Forest Code 999								
Malaysia	3,127	100.00	0	0.00	0.00	0	0.00	0.00
Forest Total	3,127	100.00	0		0.00	0		0.00

Annex 8
NATIONAL PROTECTION OF MOIST FORESTS IN TROPICAL SOUTH AND SOUTH-EAST ASIA

	Forest Area (FA) (ha)	FA % country area	PAs I–III (ha)	PAs I–III % FA in country	PAs I–VIII (ha)	PAs I–VIII % FA in country
Bangladesh, Peoples Republic of						
10	132,977	1.00	0	0.00	0	0.00
111	415,629	3.14	0	0.00	13,087	3.15
122	361,528	2.73	0	0.00	6	0.00
220	1,835,792	13.85	0	0.00	0	0.00
900	10,511,638	79.29	0	0.00	0	0.00
County Total	13,257,564	100.00	0	0.00	13,093	0.10
Bhutan, Kingdom of						
122	26	0.09	0	0.00	0	0.00
220	15,360	52.29	0	0.00	0	0.00
900	13,990	47.62	21	0.15	23	0.16
County Total	29,376	100.00	21	0.07	23	0.08
Cambodia						
10	468,727	2.57	129	0.03	14,548	3.10
111	27,606	0.15	8,226	29.80	17,981	65.13
113	785,828	4.31	0	0.00	269,888	34.34
121	235,686	1.29	66,902	28.39	134,780	57.19
122	5,605,968	30.74	423,507	7.55	1,596,796	28.48
130	1	0.00	1	100.00	1	100.00
210	5,145	0.03	0	0.00	4,680	90.96
220	4,780,972	26.21	717	0.02	842,836	17.63
900	6,329,654	34.71	263,083	4.16	520,773	8.23
County Total	18,239,587	100.00	762,565	4.18	3,402,283	18.65
India, Republic of						
10	761,129	0.25	19,544	2.57	33,653	4.42
111	12,686	0.00	0	0.00	0	0.00
113	11,020	0.00	0	0.00	0	0.00
121	876,575	0.29	0	0.00	35,513	4.05
122	2,964,788	0.97	0	0.00	65,785	2.22
210	805,826	0.26	0	0.00	38,048	4.72
220	13,074,727	4.26	364,152	2.79	560,320	4.29
900	288,117,390	93.97	1,137,410	0.39	4,607,618	1.60
County Total	306,624,141	100.00	1,521,106	0.50	5,340,937	1.74
Lao Peoples Democratic Republic						
10	215,597	0.93	0	0.00	6,496	3.01

Annex 8
NATIONAL PROTECTION OF MOIST FORESTS IN TROPICAL SOUTH AND SOUTH–EAST ASIA

	Forest Area (FA) (ha)	FA % country area	PAs I–III (ha)	PAs I–III % FA in country	PAs I–VIII (ha)	PAs I–VIII % FA in country
121	1,171,286	5.04	0	0.00	51,555	4.40
122	3,299,813	14.20	0	0.00	729,040	22.09
130	5,817,278	25.04	0	0.00	333,560	5.73
210	375,908	1.62	0	0.00	51,971	13.83
220	2,347,931	10.11	0	0.00	224,820	9.58
900	10,002,470	43.06	0	0.00	751,398	7.51
County Total	23,230,283	100.00	0	0.00	2,148,840	9.25
Malaysia, West						
10	1,086	0.01	0	0.00	0	0.00
111	116,048	0.88	0	0.00	0	0.00
113	406,446	3.07	0	0.00	1,217	0.30
121	687,907	5.19	52,434	7.62	109,433	15.91
122	5,735,620	43.31	406,723	7.09	429,545	7.49
900	6,226,301	47.02	764	0.01	5,743	0.09
999	3,127	0.02	0	0.00	0	0.00
County Total	13,176,535	100.00	459,921	3.49	545,938	4.14
Myanmar, Union of						
10	228,933	0.32	0	0.00	0	0.00
111	57,271	0.08	0	0.00	0	0.00
112	299,876	0.43	0	0.00	0	0.00
114	17,483	0.02	0	0.00	0	0.00
121	5,839,869	8.28	0	0.00	0	0.00
122	14,612,092	20.72	71	0.00	72	0.00
130	1,701,707	2.41	0	0.00	0	0.00
210	446,158	0.63	0	0.00	0	0.00
220	5,416,857	7.68	122,019	2.25	122,019	2.25
230	3,619,386	5.13	11,428	0.32	11,428	0.32
900	38,285,944	54.30	20,975	0.05	35,900	0.09
County Total	70,525,576	100.00	154,493	0.22	169,419	0.24
Nepal, Kingdom of						
220	6,678	0.12	0	0.00	2	0.03
900	5,590,340	99.88	5,550,976	99.30	5,550,978	99.30
County Total	5,597,018	100.00	5,550,976	99.18	5,550,980	99.18
Sri Lanka, Democratic Socialist Republic						
10	62,391	0.95	3,898	6.25	31,128	49.89

Annex 8
NATIONAL PROTECTION OF MOIST FORESTS IN TROPICAL SOUTH AND SOUTH–EAST ASIA

	Forest Area (FA) (ha)	FA % country area	PAs I–III (ha)	PAs I–III % FA in country	PAs I–VIII (ha)	PAs I–VIII % FA in country
121	70,599	1.07	303	0.43	16,922	23.97
122	79,899	1.21	0	0.00	0	0.00
210	21,820	0.33	1,391	6.37	3,170	14.53
220	1,088,656	16.54	259,697	23.85	355,947	32.70
900	5,259,536	79.90	228,128	4.34	446,129	8.48
County Total	6,582,901	100.00	493,417	7.50	853,296	12.96
Thailand, Kingdom of						
10	1,482,450	3.10	12,771	0.86	13,048	0.88
111	573,833	1.20	15,111	2.63	15,111	2.63
121	1,466,285	3.06	172,907	11.79	490,089	33.42
122	5,520,772	11.54	1,063,775	19.27	2,206,834	39.97
130	843	0.00	0	0.00	0	0.00
210	202,361	0.42	65,625	32.43	124,647	61.60
220	2,904,624	6.07	404,791	13.94	633,644	21.82
900	35,707,101	74.61	936,386	2.62	1,598,056	4.48
County Total	47,858,269	100.00	2,671,366	5.58	5,081,429	10.62
Viet Nam, Socialist Republic of						
10	55,613	0.17	966	1.74	3,305	5.94
111	164,786	0.51	0	0.00	0	0.00
121	751,183	2.34	4,679	0.62	135,517	18.04
122	2,811,804	8.77	38,480	1.37	242,837	8.64
130	19,778	0.06	0	0.00	0	0.00
210	143,624	0.45	0	0.00	25,318	17.63
220	1,779,226	5.55	45,663	2.57	87,840	4.94
900	26,346,211	82.18	208,300	0.79	896,581	3.40
County Total	32,072,225	100.00	298,088	0.93	1,391,398	4.34

Annex 9
ECOFLORISTIC ZONE PROTECTION IN TROPICAL COUNTRIES OF INSULAR SOUTH–EAST ASIA

	EFZ area (ha)	EFZ area % total EFZ area	PAs I–III (ha)	PAs I–III % EFZ in country	PAs I–III % total EFZ	PAs I–VIII (ha)	PAs I–VIII % EFZ in country	PAs I– VIII % total EFZ
EFZ CODE 1								
Brunei Darussalam	586,585	0.67	66,358	11.31	0.08	201,383	34.33	0.23
Indonesia	56,624,734	64.75	2,122,560	3.75	2.43	3,354,763	5.92	3.84
Malaysia	18,731,368	21.42	502,880	2.68	0.58	6,757,183	36.07	7.73
Philippines	11,501,949	13.15	22,903	0.20	0.03	846,105	7.36	0.97
EFZ Total	87,444,636	100.00	2,714,701		3.10	11,159,434		12.76
EFZ CODE 2								
Indonesia	47,440,116	100.00	2,077,869	4.38	4.38	3,131,028	6.60	6.60
EFZ Total	47,440,116	100.00	2,077,869		4.38	3,131,028		6.60
EFZ CODE 3								
Indonesia	4,033,063	100.00	411,431	10.20	10.20	429,710	10.65	10.65
EFZ Total	4,033,063	100.00	411,431		10.20	429,710		10.65
EFZ CODE 4								
Indonesia	46,585,587	57.54	1,542,775	3.31	1.91	2,418,678	5.19	2.99
Papua New Guinea	34,381,314	42.46	0	0.00	0.00	77,212	0.22	0.10
EFZ Total	80,966,901	100.00	1,542,775		1.91	2,495,890		3.08
EFZ CODE 5								
Indonesia	507,788	8.50	3,893	0.77	0.07	3,893	0.77	0.07
Philippines	5,468,690	91.50	25,986	0.48	0.43	871,551	15.94	14.58
EFZ Total	5,976,478	100.00	29,879		0.50	875,444		14.65
EFZ CODE 6								
Indonesia	183,752	100.00	0	0.00	0.00	8,000	4.35	4.35
EFZ Total	183,752	100.00	0		0.00	8,000		4.35
EFZ CODE 7								
Indonesia	981,724	17.70	664	0.07	0.01	1,122	0.11	0.02
Philippines	4,564,061	82.30	0	0.00	0.00	314,065	6.88	5.66
EFZ Total	5,545,785	100.00	664		0.01	315,187		5.68
EFZ CODE 8								
Indonesia	11,975,755	82.10	426,403	3.56	2.92	1,209,989	10.10	8.29
Papua New Guinea	2,610,669	17.90	8,303	0.32	0.06	214,452	8.21	1.47
EFZ Total	14,587,303	100.00	434,706		2.98	1,424,441		9.76
EFZ CODE 9								
Indonesia	168,573	2.78	0	0.00	0.00	0	0.00	0.00
Philippines	5,897,412	97.22	7,516	0.13	0.12	520,603	8.83	8.58

Annex 9
ECOFLORISTIC ZONE PROTECTION IN TROPICAL COUNTRIES OF INSULAR SOUTH–EAST ASIA

	EFZ area (ha)	EFZ area % total EFZ area	PAs I–III (ha)	PAs I–III % EFZ in country	PAs I–III % total EFZ	PAs I–VIII (ha)	PAs I–VIII % EFZ in country	PAs I– VIII % total EFZ
EFZ Total	6,065,985	100.00	7,516		0.12	520,603		8.58
EFZ CODE 10								
Indonesia	3,597,511	100.00	97,117	2.70	2.70	195,512	5.43	5.43
EFZ Total	3,597,511	100.00	97,117		2.70	195,512		5.43
EFZ CODE 11								
Indonesia	281,491	18.68	86,552	30.75	5.74	89,329	31.73	5.93
Papua New Guinea	1,224,219	81.25	225	0.02	0.01	338,639	27.66	22.48
EFZ Total	1,506,645	100.00	86,777		5.76	428,010		28.41
EFZ CODE 12								
Indonesia	1,046,880	100.00	0	0.00	0.00	6,298	0.60	0.60
EFZ Total	1,046,880	100.00	0		0.00	6,298		0.60
EFZ CODE 13								
Indonesia	6,925,706	69.49	1,464,482	21.15	14.69	1,753,064	25.31	17.59
Malaysia	1,010,415	10.14	106,501	10.54	1.07	436,370	43.19	4.38
Philippines	2,030,361	20.37	77,426	3.81	0.78	676,908	33.34	6.79
EFZ Total	9,966,482	100.00	1,648,409		16.54	2,866,342		28.76
EFZ CODE 14								
Indonesia	6,214,202	55.62	454,914	7.32	4.07	788,839	12.69	7.06
Papua New Guinea	4,958,356	44.38	0	0.00	0.00	10,182	0.21	0.09
EFZ Total	11,172,558	100.00	454,914		4.07	799,021		7.15
EFZ CODE 15								
Indonesia	503,419	79.61	169,598	33.69	26.82	195,106	38.76	30.85
Malaysia	128,932	20.39	17,926	13.90	2.83	74,637	57.89	11.80
EFZ Total	632,351	100.00	187,524		29.66	269,743		42.66
EFZ CODE 16								
Indonesia	3,640,971	63.92	412,804	11.34	7.25	687,458	18.88	12.07
Papua New Guinea	2,055,442	36.08	0	0.00	0.00	224	0.01	0.00
EFZ Total	5,696,413	100.00	412,804		7.25	687,682		12.07
EFZ CODE 17								
Indonesia	114,916	24.99	66,984	58.29	14.56	66,984	58.29	14.56
Papua New Guinea	344,994	75.01	0	0.00	0.00	0	0.00	0.00
EFZ Total	459,910	100.00	66,984		14.56	66,984		14.56
Regional Totals	286,323,616		10,174,070			26,679,329		8.97

ANNEX 10
NATIONAL PROTECTION OF ECOFLORISTIC ZONES IN INSULAR SOUTH–EAST ASIA

EFZ code	EFZ area (ha)	EFZ area % country area	PAs I–III (ha)	PAs I–III % country area	PAs I–VIII (ha)	PAs I– VIII % country area
Brunei Darussalam						
1	586,585	100.00	66,358	11.31	201,383	34.33
Country Total	586,585		66,358	11.31	201,383	34.33
Indonesia						
1	56,624,734	29.67	2,122,560	3.75	3,354,763	5.92
2	47,440,116	24.86	2,077,869	4.38	3,131,028	3.01
3	4,033,063	2.11	411,431	10.20	429,710	0.40
4	46,585,587	24.41	1,542,775	3.31	2,418,678	1.56
5	507,788	0.27	3,893	0.77	3,893	0.00
6	183,752	0.10	0	0.00	8,000	0.01
7	981,724	0.51	664	0.07	1,122	0.00
8	11,975,755	6.28	426,403	3.56	1,209,989	0.72
9	168,573	0.09	0	0.00	0	0.00
10	3,597,511	1.89	97,117	2.70	195,512	0.11
11	281,491	0.15	86,552	30.75	89,329	0.05
12	1,046,880	0.55	0	0.00	6,298	0.00
13	6,925,706	3.63	1,464,482	21.15	1,753,064	0.97
14	6,214,202	3.26	454,914	7.32	788,839	0.42
15	503,419	0.26	169,598	33.69	195,106	0.10
16	3,640,971	1.91	412,804	11.34	687,458	0.36
17	114,916	0.06	66,984	58.29	66,984	0.04
Country Total	190,826,188		9,338,046	4.91	14,339,773	7.54
Malaysia, East						
1	18,731,368	94.27	502,880	2.68	6,757,183	36.07
13	1,010,415	5.08	106,501	10.54	436,370	2.21
15	128,932	0.65	17,926	13.90	74,637	0.38
Country Total	19,870,715		627,307	3.16	7,268,421	36.58
Papua New Guinea						
4	34,381,314	75.44	0	0.00	77,212	0.22
8	2,610,669	5.73	8,303	0.32	214,452	0.58
11	1,224,219	2.69	225	0.02	338,639	0.89
14	4,958,356	10.88	0	0.00	10,182	0.02
16	2,055,442	4.51	0	0.00	224	0.00
17	344,994	0.76	0	0.00	0	0.00
Country Total	45,574,994		8,528	0.02	640,709	1.41

ANNEX 10
NATIONAL PROTECTION OF ECOFLORISTIC ZONES IN INSULAR SOUTH–EAST ASIA

EFZ code	EFZ area (ha)	EFZ area % country area	PAs I–III (ha)	PAs I–III % country area	PAs I–VIII (ha)	PAs I– VIII % country area
Philippines						
1	11,501,949	39.04	22,903	0.20	846,105	7.36
5	5,468,690	18.56	25,986	0.48	871,551	5.14
7	4,564,061	15.49	0	0.00	314,065	1.46
9	5,897,412	20.02	7,516	0.13	520,603	1.90
13	2,030,361	6.89	77,426	3.81	676,908	2.30
Country Total	29,462,473		133,831	0.45	3,229,232	10.96

Annex 11
MOIST FOREST PROTECTION IN TROPICAL COUNTRIES OF INSULAR SOUTH–EAST ASIA

	Forest Area (FA) (ha)	FA % total FA	PAs I–III (ha)	PAs I–III % FA in country	PAs I–III % total FA	PAs I–VIII (ha)	PAs I– VIII % FA in country	PAs I– VIII % total FA
Forest Code 10								
Indonesia	722,088	59.61	12,432	1.72	1.03	88,036	12.19	7.27
Malaysia, East	2,638	0.22	880	33.36	0.07	880	33.36	0.07
Papua New Guinea	182,896	15.10	0	0.00	0.00	9,037	4.94	0.75
Philippines	220,874	18.23	2,750	1.25	0.23	16,483	7.46	1.36
Solomon Islands	13,497	1.11	0	0.00	0.00	0	0.00	0.00
Forest Total	1,141,993	94.27	16,062		1.33	114,436		9.45
Forest Code 111								
Brunei Darussalam	20,917	0.36	0	0.00	0.00	0	0.00	0.00
Indonesia	4,413,652	76.70	281,961	6.39	4.90	454,298	10.29	7.89
Malaysia, East	641,665	11.15	712	0.11	0.01	157,197	24.50	2.73
Papua New Guinea	535,804	9.31	0	0.00	0.00	30,157	5.63	0.52
Philippines	2,089	0.04	0	0.00	0.00	0	0.00	0.00
Forest Total	5,614,127	98	282,673		4.91	641,652		11.27
Forest Code 113								
Brunei Darussalam	169,531	0.64	2,198	1.30	0.01	49,925	29.45	0.19
Indonesia	17,982,310	67.49	768,279	4.27	2.88	944,152	5.25	3.54
Malaysia, East	1,852,985	6.95	7,622	0.41	0.03	607,616	32.79	2.28
Papua New Guinea	6,635,854	24.91	69	0.00	0.00	4,580	0.07	0.02
Forest Total	26,640,680	99.99	778,168		2.92	1,606,273		6.03
Forest Code 121								
Brunei Darussalam	7,381	0.03	6,594	89.34	0.03	6,594	89.34	0.03
Indonesia	14,139,136	59.07	2,402,617	16.99	10.04	3,591,605	25.40	15.00
Malaysia, East	2,696,524	11.27	178,941	6.64	0.75	1,112,297	41.25	4.65
Papua New Guinea	6,467,010	27.02	0	0.00	0.00	1,360	0.02	0.01
Philippines	544,195	2.27	34,372	6.32	0.14	63,893	11.74	0.27
Solomon Islands	80,939	0.34	0	0.00	0.00	0	0.00	0.00
Forest Total	23,935,185	100.00	2,622,524		10.96	4,775,749		19.96
Forest Code 122								
Brunei Darussalam	272,246	0.23	52,884	19.43	0.04	123,781	45.47	0.10
Indonesia	78,299,841	64.81	4,323,860	5.52	3.58	6,176,884	7.89	5.11
Malaysia, East	14,691,795	12.16	344,236	2.34	0.28	4,606,908	31.36	3.81
Papua New Guinea	22,977,488	19.02	1,976	0.01	0.00	56,683	0.25	0.05
Philippines	1,104,253	0.91	0	0.00	0.00	174,598	15.81	0.14
Solomon Islands	2,502,571	2.07	0	0.00	0.00	0	0.00	0.00

Annex 11
MOIST FOREST PROTECTION IN TROPICAL COUNTRIES OF INSULAR SOUTH–EAST ASIA

	Forest Area (FA) (ha)	FA % total FA	PAs I–III (ha)	PAs I–III % FA in country	PAs I–III % total FA	PAs I–VIII (ha)	PAs I– VIII % FA in country	PAs I– VIII % total FA
Forest Total	119,848,194	99.20	4,722,956		3.90	11,138,854		9.27
Forest Code 130								
Philippines	2,238,717	100.00	13,561	0.61	0.61	341,901	15.27	15.27
Forest Total	2,238,717	100.00	13,561		0.61	341,901		15.27
Forest Code 210								
Indonesia	120,284	22.89	36,754	30.56	7.00	38,083	31.66	7.25
Philippines	405,127	77.11	0	0.00	0.00	244,802	60.43	46.59
Forest Total	525,411	100.00	36,754		7.00	282,885		53.84
Forest Code 220								
Indonesia	2,930,342	81.58	59,086	2.02	1.64	164,578	5.62	4.58
Papua New Guinea	321,196	8.94	0	0.00	0.00	42,295	13.17	1.18
Philippines	301,479	8.39	3,250	1.08	0.09	99,701	33.07	2.78
Forest Total	3,553,017	98.91	62,336		1.73	306,574		8.63
Forest Code 230								
Philippines	502,368	100.00	1,151	0.23	0.23	82,791	16.48	16.48
Forest Total	502,368	100.00	1,151		0.23	82,791		16.48
Forest Code 900								
Brunei Darussalam	116,430	0.10	4,682	4.02	0.00	21,083	18.11	0.02
Indonesia	71,313,806	59.12	1,482,425	2.08	1.23	2,919,392	4.09	2.42
Malaysia, East	13,067,940	10.83	94,870	0.73	0.08	773,914	5.92	0.64
Papua New Guinea	8,988,493	7.45	6,483	0.07	0.01	493,389	5.49	0.41
Philippines	24,300,745	20.15	78,746	0.32	0.07	2,203,670	9.07	1.83
Solomon Islands	186,143	0.15	0	0.00	0.00	0	0.00	0.00
Forest Total	117,973,557	97.80	1,667,206		1.39	6,411,448		5.32
Forest Code 999								
Malaysia, East	3,092	98.82	0	0.00	0.00	0	0.00	0.00
Forest Total	3,092	98.82	0		0.00	0		0.00

Annex 12
NATIONAL PROTECTION OF MOIST FORESTS IN INSULAR SOUTH–EAST ASIA

	Forest Area (FA) (ha)	FA % country area	PAs I–III (ha)	PAs I–III % FA in country	PAs I–VIII (ha)	PAs I–VIII % FA in country
Brunei Darussalam						
111	20,917	3.57	0	0.00	0	0.00
113	169,531	28.90	2,198	1.30	49,925	29.45
121	7,381	1.26	6,594	89.34	6,594	89.34
122	272,246	46.41	52,884	19.43	123,781	45.47
900	116,430	19.85	4,682	4.02	21,083	18.11
County Total	586,505	100.00	66,358	11.31	201,383	34.34
Indonesia, Republic of						
10	722,088	0.38	12,432	1.72	88,036	12.19
111	4,413,652	2.31	281,961	6.39	454,298	10.29
113	17,982,310	9.42	768,279	4.27	944,152	5.25
121	14,139,135	7.41	2,402,617	16.99	3,591,605	25.40
122	78,299,841	41.03	4,323,860	5.52	6,176,884	7.89
210	120,284	0.06	36,754	30.56	38,083	31.66
220	2,930,342	1.54	59,086	2.02	164,578	5.62
900	71,313,806	37.37	1,482,425	2.08	2,919,392	4.09
County Total	189,921,459	100.00	9,376,539	4.94	14,394,075	7.58
Malaysia, East						
10	2,638	0.01	880	33.36	880	33.36
111	641,665	3.23	712	0.11	157,197	24.50
113	1,852,985	9.33	7,622	0.41	607,616	32.79
121	2,696,524	13.57	178,941	6.64	1,112,297	41.25
122	14,691,795	73.94	344,236	2.34	4,606,908	31.36
900	13,067,940	65.76	94,870	0.73	773,914	5.92
999	3,092	0.02	0	0.00	0	0.00
County Total	32,956,639	100.00	627,307	1.90	7,268,421	22.05
Papua New Guinea						
10	182,896	0.40	0	0.00	9,037	4.94
111	535,804	1.18	0	0.00	30,157	5.63
113	6,635,854	14.56	69	0.00	4,580	0.07
121	6,467,010	14.19	0	0.00	1,360	0.02
122	22,977,488	50.42	1,976	0.01	56,683	0.25
220	321,196	0.70	0	0.00	42,295	13.17
900	8,988,493	19.72	6,483	0.07	493,389	5.49
County Total	46,108,741	100.00	8,528	0.02	640,709	1.39

Annex 12
NATIONAL PROTECTION OF MOIST FORESTS IN INSULAR SOUTH–EAST ASIA

	Forest Area (FA) (ha)	FA % country area	PAs I–III (ha)	PAs I–III % FA in country	PAs I–VIII (ha)	PAs I–VIII % FA in country
Philippines, Republic of the						
10	220,874	0.75	2,750	1.25	16,483	7.46
111	2,089	0.01	0	0.00	0	0.00
121	544,195	1.85	34,372	6.32	63,893	11.74
122	1,104,253	3.75	0	0.00	174,598	15.81
130	2,238,717	7.60	13,561	0.61	341,901	15.27
210	405,127	1.38	0	0.00	244,802	60.43
220	301,479	1.02	3,250	1.08	99,701	33.07
230	502,368	1.71	1,151	0.23	82,791	16.48
900	24,300,745	82.48	78,746	0.32	2,203,670	9.07
County Total	29,619,847	100.00	133,831	0.45	3,229,232	10.90
Solomon Islands						
10	13,497	0.48	0	0.00	0	0.00
121	80,939	2.91	0	0.00	0	0.00
122	2,502,571	89.92	0	0.00	0	0.00
900	186,143	6.96	0	0.00	0	0.00
Country Total	2,783,150	100.00	0	0.00	0	0.00

Annex 13
ECOFLORISTIC ZONE PROTECTION IN TROPICAL COUNTRIES OF SOUTH AMERICA

	EFZ area (ha)	EFZ area % total EFZ area	PAs I–III (ha)	PAs I–III % EFZ in country	PAs I–III % total EFZ	PAs I–VIII (ha)	PAs I–VIII % EFZ in country	PAs I– VIII % total EFZ
EFZ CODE 1								
Brazil	93,872,369	54.78	5,208,644	5.55	3.04	23,760,888	25.31	13.87
Colombia	38,699,229	22.58	2,931,635	7.58	1.71	10,943,391	28.28	6.39
Ecuador	7,806,959	4.56	1,030,450	13.20	0.60	1,713,251	21.95	1.00
French Guiana	726,112	0.42	0	0.00	0.00	3	0.00	0.00
Peru	27,996,402	16.34	4	0.00	0.00	2,080,000	7.43	1.21
Venezuela	2,268,310	1.32	1,079,516	47.59	0.63	1,079,516	47.59	0.63
EFZ Total	171,369,381	100.00	10,250,249		5.98	39,577,049		23.10
EFZ CODE 2								
Brazil	211,808,762	69.46	2,181,318	1.03	0.72	28,177,315	13.30	9.24
Colombia	24,054,124	7.89	1,204,211	5 01	0.39	4,199,381	17.46	1.38
Ecuador	1,816,452	0.60	0	0.00	0.00	0	0.00	0.00
French Guiana	7,590,519	2.49	0	0.00	0.00	0	0.00	0.00
Guyana	12,449,029	4.08	0	0.00	0.00	0	0.00	0.00
Peru	18,324,609	6.01	20,148	0.11	0.01	42,890	0.23	0.01
Surlname	8,462,024	2.78	82,984	0.98	0.03	184,296	2.18	0.06
Venezuela	20,420,616	6.70	3,337,825	16.35	1.09	3,347,419	16.39	1.10
EFZ Total	304,926,135	100.00	6,826,486		2.24	35,951,301		11.79
EFZ CODE 3								
Colombia	125,137	73.78	9,301	7.43	5.48	9,301	7.43	5.48
Venezuela	44,464	26.22	44,464	100.00	26.22	44,464	100.00	26.22
EFZ Total	169,601	100.00	53,765		31.70	53,765		31.70
EFZ CODE 4								
Bolivia	36,974,549	22.93	1,560,171	4.22	0.97	6,444,168	17.43	4.00
Brazil	90,107,742	55.88	901,597	1.00	0.56	11,048,526	12.26	6.85
Colombia	3,548,337	2.20	136,465	3.85	0.08	149,188	4.20	0.09
Ecuador	2,851,184	1.77	31,372	1.10	0.02	31,372	1.10	0.02
French Guiana	58,941	0.04	0	0.00	0.00	0	0.00	0.00
Guyana	2,314,736	1.44	0	0.00	0.00	0	0.00	0.00
Peru	13,343,894	8.28	861,758	6.46	0.53	1,420,318	10.64	0.88
Surlname	2,181,050	1.35	0	0.00	0.00	128,790	5.90	0.08
Venezuela	9,872,584	6.12	586,753	5.94	0.36	1,684,707	17.06	1.04
EFZ Total	161,253,017	100.00	4,078,116		2.53	20,907,069		12.97

Annex 13
ECOFLORISTIC ZONE PROTECTION IN TROPICAL COUNTRIES OF SOUTH AMERICA

	EFZ area (ha)	EFZ area % total EFZ area	PAs I–III (ha)	PAs I–III % EFZ in country	PAs I–III % total EFZ	PAs I–VIII (ha)	PAs I–VIII % EFZ in country	PAs I– VIII % total EFZ
EFZ CODE 5								
Brazil	26,260,263	100.00	297,435	1.13	1.13	318,918	1.21	1.21
EFZ Total	26,260,263	100.00	297,435		1.13	318,918		1.21
EFZ CODE 6								
Brazil	1,878,735	49.37	0	0.00	0.00	0	0.00	0.00
Paraguay	1,926,862	50.63	8,907	0.46	0.23	33,787	1.75	0.89
EFZ Total	3,805,597	100.00	8,907		0.23	33,787		0.89
EFZ CODE 7								
Ecuador	307,378	51.01	17,298	5.63	2.87	17,298	5.63	2.87
Peru	295,239	48.99	0	0.00	0.00	0	0.00	0.00
EFZ Total	602,617	100.00	17,298		2.87	17,298		2.87
EFZ CODE 8								
Brazil	406,981	100.00	0	0.00	0.00	0	0.00	0.00
EFZ Total	406,981	100.00	0		0.00	0		0.00
EFZ CODE 9								
Bolivia	15,763,524	65.42	807,388	5.12	3.35	1,779,125	11.29	7.38
Brazil	281,445	1.17	54,767	19.46	0.23	54,767	19.46	0.23
Colombia	7,677,879	31.87	121,812	1.59	0.51	130,631	1.70	0.54
Ecuador	372,087	1.54	39,697	10.67	0.16	39,697	10.67	0.16
EFZ Total	24,094,935	100.00	1,023,664		4.25	2,004,220		8.32
EFZ CODE 10								
Bolivia	452,008	0.23	0	0.00	0.00	0	0.00	0.00
Brazil	131,342,065	67.66	853,240	0.65	0.44	10,949,706	8.34	5.64
Colombia	15,794,123	8.14	573,747	3.63	0.30	1,536,660	9.73	0.79
Guyana	4,589,165	2.36	421	0.01	0.00	9,597	0.21	0.00
Suriname	4,030,710	2.08	0	0.00	0.00	331,241	8.22	0.17
Venezuela	37,910,103	19.53	1,865,488	4.92	0.96	3,098,633	8.17	1.60
EFZ Total	194,118,174	100.00	3,292,896		1.70	15,925,837		8.20
EFZ CODE 11								
Bolivia	1,260,938	8.52	0	0.00	0.00	0	0.00	0.00
Brazil	13,366,178	90.29	89,611	0.67	0.61	147,322	1.10	1.00
Paraguay	176,410	1.19	0	0.00	0.00	0	0.00	0.00
EFZ Total	14,803,526	100.00	89,611		0.61	147,322		1.00

Annex 13
ECOFLORISTIC ZONE PROTECTION IN TROPICAL COUNTRIES OF SOUTH AMERICA

	EFZ area (ha)	EFZ area % total EFZ area	PAs I–III (ha)	PAs I–III % EFZ in country	PAs I–III % total EFZ	PAs I–VIII (ha)	PAs I–VIII % EFZ in country	PAs I– VIII % total EFZ
EFZ CODE 12								
Brazil	53,042	0.27	0	0.00	0.00	0	0.00	0.00
Paraguay	19,383,934	99.73	284,464	1.47	1.46	374,448	1.93	1.93
EFZ Total	19,436,976	100.00	284,464		1.46	374,448		1.93
EFZ CODE 13								
Bolivia	434,204	11.50	0	0.00	0.00	0	0.00	0.00
Colombia	235,283	6.23	0	0.00	0.00	0	0.00	0.00
Ecuador	1,482,557	39.27	0	0.00	0.00	0	0.00	0.00
Peru	396,224	10.50	77,734	19.62	2.06	77,734	19.62	2.06
Venezuela	1,226,747	32.50	84,273	6.87	2.23	336,922	27.46	8.93
EFZ Total	3,775,015	100.00	162,007		4.29	414,656		10.98
EFZ CODE 14								
Brazil	84,488,856	100.00	271,926	0.32	0.32	326,639	0.39	0.39
EFZ Total	84,488,856	100.00	271,926		0.32	326,639		0.39
EFZ CODE 15								
Colombia	1,370,577	28.14	2,653	0.19	0.05	81,938	5.98	1.68
Venezuela	3,499,636	71.86	136,157	3.89	2.80	463,062	13.23	9.51
EFZ Total	4,870,213	100.00	138,810		2.85	545,000		11.19
EFZ CODE 16								
Bolivia	15,982,103	46.67	5,583	0.03	0.02	27,497	0.17	0.08
Brazil	186,374	0.54	0	0.00	0.00	0	0.00	0.00
Paraguay	18,078,564	52.79	895,708	4.95	2.62	895,708	4.95	2.62
EFZ Total	34,247,041	100.00	901,291		2.63	923,205		2.70
EFZ CODE 17								
Colombia	942,071	9.91	23,530	2.50	0.25	854,404	90.69	8.99
Ecuador	199,855	2.10	412	0.21	0.00	412	0.21	0.00
Peru	7,124,917	74.96	17,702	0.25	0.19	54,519	0.77	0.57
Venezuela	1,237,883	13.02	139,585	11.28	1.47	223,995	18.10	2.36
EFZ Total	9,504,726	100.00	181,229		1.91	1,133,330		11.92
EFZ CODE 18								
Peru	5,533,557	100.00	6,976	0.13	0.13	6,976	0.13	0.13
EFZ Total	5,533,557	100.00	6,976		0.13	6,976		0.13

Annex 13
ECOFLORISTIC ZONE PROTECTION IN TROPICAL COUNTRIES OF SOUTH AMERICA

	EFZ area (ha)	EFZ area % total EFZ area	PAs I–III (ha)	PAs I–III % EFZ in country	PAs I–III % total EFZ	PAs I–VIII (ha)	PAs I–VIII % EFZ in country	PAs I– VIII % total EFZ
EFZ CODE 19								
Bolivia	4,303	0.00	0	0.00	0.00	0	0.00	0.00
Brazil	146,928,813	99.70	846,124	0.58	0.57	1,088,563	0.74	0.74
Paraguay	440,763	0.30	1,665	0.38	0.00	1,665	0.38	0.00
EFZ Total	147,373,879	100.00	847,789		0.58	1,090,228		0.74
EFZ CODE 20								
Brazil	46,353,268	100.00	252,888	0.55	0.55	370,713	0.80	0.80
EFZ Total	46,353,268	100.00	252,888		0.55	370,713		0.80
EFZ CODE 29								
Bolivia	5,189,632	17.01	919,469	17.72	3.01	1,228,403	23.67	4.03
Brazil	1,905,331	6.24	3	0.00	0.00	1,333,912	70.01	4.37
Colombia	5,629,476	18.45	666,132	11.83	2.18	769,786	13.67	2.52
Guyana	28,080	0.09	0	0.00	0.00	0	0.00	0.00
Peru	6,334,064	20.76	60,343	0.95	0.20	60,343	0.95	0.20
Venezuela	11,425,358	37.45	3,648,790	31.94	11.96	3,701,466	32.40	12.13
EFZ Total	30,511,941	100.00	5,294,737		17.35	7,093,910		23.25
EFZ CODE 30								
Bolivia	898,383	5.90	0	0.00	0.00	0	0.00	0.00
Brazil	873,784	5.74	38,399	4.39	0.25	38,399	4.39	0.25
Colombia	4,601,084	30.23	115,440	2.51	0.76	213,933	4.65	1.41
Ecuador	4,068,843	26.73	162,001	3.98	1.06	195,510	4.81	1.28
Guyana	1,742,944	11.45	0	0.00	0.00	0	0.00	0.00
Peru	2,327,670	15.29	65,747	2.82	0.43	65,747	2.82	0.43
Venezuela	707,094	4.65	106,567	15.07	0.70	393,485	55.65	2.59
EFZ Total	15,219,802	100.00	488,154		3.21	907,074		5.96
EFZ CODE 31								
Bolivia	823,993	54.79	0	0.00	0.00	108,477	13.16	7.21
Brazil	679,845	45.21	12,749	1.88	0.85	12,749	1.88	0.85
EFZ Total	1,503,838	100.00	12,749		0.85	121,226		8.06
EFZ CODE 32								
Brazil	659,452	100.00	118,298	17.94	17.94	118,298	17.94	17.94
EFZ Total	659,452	100.00	118,298		17.94	118,298		17.94

Annex 13
ECOFLORISTIC ZONE PROTECTION IN TROPICAL COUNTRIES OF SOUTH AMERICA

	EFZ area (ha)	EFZ area % total EFZ area	PAs I–III (ha)	PAs I–III % EFZ in country	PAs I–III % total EFZ	PAs I–VIII (ha)	PAs I–VIII % EFZ in country	PAs I– VIII % total EFZ
EFZ CODE 33								
Ecuador	191,623	2.66	1,599	0.83	0.02	1,599	0.83	0.02
Peru	6,344,865	88.15	559,011	8.81	7.77	1,111,482	17.52	15.44
Venezuela	661,322	9.19	222,265	33.61	3.09	442,126	66.85	6.14
EFZ Total	7,197,810	100.00	782,875		10.88	1,555,207		21.61
EFZ CODE 34								
Colombia	827,107	17.57	0	0.00	0.00	0	0.00	0.00
Peru	3,268,113	69.44	0	0.00	0.00	0	0.00	0.00
Venezuela	611,300	12.99	92,146	15.07	1.96	255,149	41.74	5.42
EFZ Total	4,706,520	100.00	92,146		1.96	255,149		5.42
EFZ CODE 35								
Bolivia	2,474,393	22.93	314,659	12.72	2.92	378,910	15.31	3.51
Colombia	4,278,401	39.64	341,195	7.97	3.16	386,167	9.03	3.58
Ecuador	445,795	4.13	79,415	17.81	0.74	79,415	17.81	0.74
Peru	3,271,600	30.32	303,139	9.27	2.81	696,300	21.28	6.45
Venezuela	321,759	2.98	40,393	12.55	0.37	170,144	52.88	1.58
EFZ Total	10,791,948	100.00	1,078,801		10.00	1,710,936		15.85
EFZ CODE 36								
Colombia	3,517,608	83.38	490,135	13.93	11.62	551,495	15.68	13.07
Ecuador	44,864	1.06	0	0.00	0.00	0	0.00	0.00
Peru	135,866	3.22	32,442	23.88	0.77	32,442	23.88	0.77
Venezuela	520,294	12.33	98,888	19.01	2.34	364,573	70.07	8.64
EFZ Total	4,218,632	100.00	621,465		14.73	948,510		22.48
EFZ CODE 37								
Bolivia	153,772	2.26	0	0.00	0.00	0	0.00	0.00
Colombia	955,916	14.03	113,790	11.90	1.67	120,530	12.61	1.77
Ecuador	2,928,109	42.97	489,769	16.73	7.19	489,769	16.73	7.19
Peru	2,412,410	35.40	36,434	1.51	0.53	36,434	1.51	0.53
Venezuela	364,385	5.35	70,877	19.45	1.04	323,883	88.88	4.75
EFZ Total	6,814,592	100.00	710,870		10.43	970,616		14.24

Annex 13
ECOFLORISTIC ZONE PROTECTION IN TROPICAL COUNTRIES OF SOUTH AMERICA

	EFZ area (ha)	EFZ area % total EFZ area	PAs I–III (ha)	PAs I–III % EFZ in country	PAs I–III % total EFZ	PAs I–VIII (ha)	PAs I–VIII % EFZ in country	PAs I– VIII % total EFZ
EFZ CODE 38								
Bolivia	4,643,952	22.84	0	0.00	0.00	171,659	3.70	0.84
Colombia	1,125,234	5.54	0	0.00	0.00	0	0.00	0.00
Peru	14,559,896	71.62	147,321	1.01	0.72	437,315	3.00	2.15
EFZ Total	20,329,082	100.00	147,321		0.72	608,974		3.00
EFZ CODE 39								
Bolivia	23,707,457	51.56	96,799	0.41	0.21	2,227,836	9.40	4.85
Colombia	860,032	1.87	234,031	27.21	0.51	234,031	27.21	0.51
Ecuador	3,194,797	6.95	542,929	16.99	1.18	642,708	20.12	1.40
Peru	18,087,942	39.34	343,196	1.90	0.75	363,767	2.01	0.79
Venezuela	130,586	0.28	48,750	37.33	0.11	76,226	58.37	0.17
EFZ Total	45,980,814	100.00	1,265,705		2.75	3,544,568		7.71
Regional Totals	1,405,328,189		39,598,928			137,956,220		9.82

Annex 14
NATIONAL PROTECTION OF ECOFLORISTIC ZONES IN SOUTH AMERICA

EFZ code	EFZ area (ha)	EFZ area % country area	PAs I–III (ha)	PAs I–III % country area	PAs I–VIII (ha)	PAs I– VIII % country area
Bolivia						
4	36,974,549	34.00	1,560,171	4.22	6,444,168	17.43
9	15,763,524	14.49	807,388	5.12	1,779,125	3.37
10	452,008	0.42	0	0.00	0	0.00
11	1,260,938	1.16	0	0.00	0	0.00
13	434,204	0.40	0	0.00	0	0.00
16	15,982,103	14.69	5,583	0.03	27,497	0.04
19	4,303	0.00	0	0.00	0	0.00
29	5,189,632	4.77	919,469	17.72	1,228,403	1.62
30	898,383	0.83	0	0.00	0	0.00
31	823,993	0.76	0	0.00	108,477	0.14
35	2,474,393	2.28	314,659	12.72	378,910	0.47
37	153,772	0.14	0	0.00	0	0.00
38	4,643,952	4.27	0	0.00	171,659	0.20
39	23,707,457	21.80	96,799	0.41	2,227,836	2.05
Country Total	108,763,211	100.00	3,704,069	3.41	12,366,075	11.37
Brazil						
1	93,872,369	11.02	5,208,644	5.55	23,760,888	25.31
2	211,808,762	24.88	2,181,318	1.03	28,177,315	9.22
4	90,107,742	10.58	901,597	1.00	11,048,526	2.79
5	26,260,263	3.08	297,435	1.13	318,918	0.08
6	1,878,735	0.22	0	0.00	0	0.00
8	406,981	0.05	0	0.00	0	0.00
9	281,445	0.03	54,767	19.46	54,767	0.01
10	131,342,065	15.43	853,240	0.65	10,949,706	1.97
11	13,366,178	1.57	89,611	0.67	147,322	0.03
12	53,042	0.01	0	0.00	0	0.00
14	84,488,856	9.92	271,926	0.32	326,639	0.05
16	186,374	0.02	0	0.00	0	0.00
19	146,928,813	17.26	846,124	0.58	1,088,563	0.14
20	46,353,268	5.44	252,888	0.55	370,713	0.04
29	1,905,331	0.22	3	0.00	1,333,912	0.16
30	873,784	0.10	38,399	4.39	38,399	0.00
31	679,845	0.08	12,749	1.88	12,749	0.00
32	659,452	0.08	118,298	17.94	118,298	0.01
Country Total	851,453,305	99.99	11,126,999	1.31	77,746,715	9.13

Annex 14
NATIONAL PROTECTION OF ECOFLORISTIC ZONES IN SOUTH AMERICA

EFZ code	EFZ area (ha)	EFZ area % country area	PAs I–III (ha)	PAs I–III % country area	PAs I–VIII (ha)	PAs I– VIII % country area
Colombia						
1	38,699,229	33.87	2,931,635	7.58	10,943,391	28.28
2	24,054,124	21.06	1,204,211	5.01	4,199,381	6.69
3	125,137	0.11	9,301	7.43	9,301	0.01
4	3,548,337	3.11	136,465	3.85	149,188	0.22
9	7,677,879	6.72	121,812	1.59	130,631	0.18
10	15,794,123	13.83	573,747	3.63	1,536,660	1.71
13	235,283	0.21	0	0.00	0	0.00
15	1,370,577	1.20	2,653	0.19	81,938	0.09
17	942,071	0.82	23,530	2.50	854,404	0.92
29	5,629,476	4.93	666,132	11.83	769,786	0.78
30	4,601,084	4.03	115,440	2.51	213,933	0.21
34	827,107	0.72	0	0.00	0	0.00
35	4,278,401	3.75	341,195	7.97	386,167	0.36
36	3,517,608	3.08	490,135	13.93	551,495	0.50
37	955,916	0.84	113,790	11.90	120,530	0.11
38	1,125,234	0.98	0	0.00	0	0.00
39	860,032	0.75	234,031	27.21	234,031	0.20
Country Total	114,241,618	100.00	6,964,077	6.10	20,180,836	17.67
Ecuador						
1	7,806,959	30.36	1,030,450	13.20	1,713,251	21.95
2	1,816,452	7.07	0	0.00	0	0.00
4	2,851,184	11.09	31,372	1.10	31,372	0.25
7	307,378	1.20	17,298	5.63	17,298	0.14
9	372,087	1.45	39,697	10.67	39,697	0.30
13	1,482,557	5.77	0	0.00	0	0.00
17	199,855	0.78	412	0.21	412	0.00
30	4,068,843	15.83	162,001	3.98	195,510	1.03
33	191,623	0.75	1,599	0.83	1,599	0.01
35	445,795	1.73	79,415	17.81	79,415	0.41
36	44,864	0.17	0	0.00	0	0.00
37	2,928,109	11.39	489,769	16.73	489,769	2.18
39	3,194,797	12.43	542,929	16.99	642,708	2.50
Country Total	25,710,503	100.00	2,394,942	9.32	3,211,031	12.49
French Guiane						
1	726,112	8.67	0	0.00	3	0.00
2	7,590,519	90.63	0	0.00	0	0.00

Annex 14
NATIONAL PROTECTION OF ECOFLORISTIC ZONES IN SOUTH AMERICA

EFZ code	EFZ area (ha)	EFZ area % country area	PAs I–III (ha)	PAs I–III % country area	PAs I–VIII (ha)	PAs I– VIII % country area
4	58,941	0.70	0	0.00	0	0.00
Country Total	8,375,572	100.00	0	0.00	3	0.00
Guyana						
2	12,449,029	58.93	0	0.00	0	0.00
4	2,314,736	10.96	0	0.00	0	0.00
10	4,589,165	21.72	421	0.01	9,597	0.05
29	28,080	0.13	0	0.00	0	0.00
30	1,742,944	8.25	0	0.00	0	0.00
Country Total	21,123,954	99.99	421	0.00	9,597	0.05
Paraguay						
6	1,926,862	4.82	8,907	0.46	33,787	1.75
11	176,410	0.44	0	0.00	0	0.00
12	19,383,934	48.45	284,464	1.47	374,448	1.74
16	18,078,564	45.19	895,708	4.95	895,708	2.26
19	440,763	1.10	1,665	0.38	1,665	0.00
Country Total	40,006,533	100.00	1,190,744	2.98	1,305,608	3.26
Peru						
1	27,996,402	21.58	4	0.00	2,080,000	1.60
2	18,324,609	14.12	20,148	0.11	42,890	0.09
4	13,343,894	10.28	861,758	6.46	1,420,318	2.38
7	295,239	0.23	0	0.00	0	0.00
13	396,224	0.31	77,734	19.62	77,734	0.13
17	7,124,917	5.49	17,702	0.25	54,519	0.08
18	5,533,557	4.26	6,976	0.13	6,976	0.01
29	6,334,064	4.88	60,343	0.95	60,343	0.08
30	2,327,670	1.79	65,747	2.82	65,747	0.08
33	6,344,865	4.89	559,011	8.81	1,111,482	1.26
34	3,268,113	2.52	0	0.00	0	0.00
35	3,271,600	2.52	303,139	9.27	696,300	0.74
36	135,866	0.10	32,442	23.88	32,442	0.03
37	2,412,410	1.86	36,434	1.51	36,434	0.04
38	14,559,896	11.22	147,321	1.01	437,315	0.39
39	18,087,942	13.94	343,196	1.90	363,767	0.28
Country Total	129,757,268	99.99	2,531,955	1.95	6,486,267	5.00

Annex 14
NATIONAL PROTECTION OF ECOFLORISTIC ZONES IN SOUTH AMERICA

EFZ code	EFZ area (ha)	EFZ area % country area	PAs I–III (ha)	PAs I–III % country area	PAs I–VIII (ha)	PAs I– VIII % country area
Suriname						
2	8,462,024	57.67	82,984	0.98	184,296	2.18
4	2,181,050	14.86	0	0.00	128,790	1.21
10	4,030,710	27.47	0	0.00	331,241	2.26
Country Total	14,673,784	100.00	82,984	0.57	644,327	4.39
Venezuela						
1	2,268,310	2.49	1,079,516	47.59	1,079,516	47.59
2	20,420,616	22.39	3,337,825	16.35	3,347,419	14.75
3	44,464	0.05	44,464	100.00	44,464	0.20
4	9,872,584	10.82	586,753	5.94	1,684,707	5.17
10	37,910,103	41.56	1,865,488	4.92	3,098,633	4.39
13	1,226,747	1.34	84,273	6.87	336,922	0.47
15	3,499,636	3.84	136,157	3.89	463,062	0.62
17	1,237,883	1.36	139,585	11.28	223,995	0.29
29	11,425,358	12.52	3,648,790	31.94	3,701,466	4.21
30	707,094	0.78	106,567	15.07	393,485	0.44
33	661,322	0.72	222,265	33.61	442,126	0.50
34	611,300	0.67	92,146	15.07	255,149	0.28
35	321,759	0.35	40,393	12.55	170,144	0.19
36	520,294	0.57	98,888	19.01	364,573	0.40
37	364,385	0.40	70,877	19.45	323,883	0.36
39	130,586	0.14	48,750	37.33	76,226	0.08
Country Total	91,222,441	100.00	11,602,737	12.72	16,005,770	17.55

Annex 15
MOIST FOREST PROTECTION IN TROPICAL COUNTRIES OF SOUTH AMERICA

	Forest Area (FA) (ha)	FA % total FA	PAs I–III (ha)	PAs I–III % FA in country	PAs I–III % total FA	PAs I–VIII (ha)	PAs I– VIII % FA in country	PAs I– VIII % total FA
Forest Code 10								
Bolivia	1,272,201	6.50	5,677	0.45	0.03	254,365	19.99	1.30
Brazil	13,441,507	68.72	166,677	1.24	0.85	830,853	6.18	4.25
Colombia	629,071	3.22	10,923	1.74	0.06	17,945	2.85	0.09
Ecuador	195,180	1.00	1,621	0.83	0.01	22,932	11.75	0.12
French Guiana	40,163	0.21	0	0.00	0.00	3	0.01	0.00
Guyana	282,049	1.44	0	0.00	0.00	0	0.00	0.00
Peru	1,923,265	9.83	7,502	0.39	0.04	47,095	2.45	0.24
Paraguay	378,266	1.93	15,766	4.17	0.08	15,768	4.17	0.08
Suriname	312,263	1.60	0	0.00	0.00	1,652	0.53	0.01
Venezuela	1,083,528	5.54	68,559	6.33	0.35	114,807	10.60	0.59
Forest Total	19,557,493	100.00	276,725		1.42	1,305,420		6.68
Forest Code 111								
Brazil	1,637,132	51.50	160,253	9.79	5.04	160,253	9.79	5.04
Colombia	367,982	11.58	79,787	21.68	2.51	82,325	22.37	2.59
Ecuador	237,736	7.48	32,081	13.49	1.01	32,081	13.49	1.01
French Guiana	94,699	2.98	0	0.00	0.00	0	0.00	0.00
Peru	98,159	3.09	0	0.00	0.00	0	0.00	0.00
Suriname	108,761	3.42	0	0.00	0.00	22,796	20.96	0.72
Venezuela	595,083	18.72	97,548	16.39	3.07	190,747	32.05	6.00
Forest Total	3,139,552	100.00	369,669		11.63	488,202		15.55
Forest Code 113								
French Guiana	632,116	6.36	0	0.00	0.00	0	0.00	0.00
Peru	5,753,283	57.85	29,922	0.52	0.30	29,922	0.52	0.30
Suriname	1,301,428	13.08	0	0.00	0.00	74,716	5.74	0.75
Venezuela	2,254,261	22.66	395,787	17.56	3.98	689,454	30.58	6.93
Forest Total	9,941,088	99.95	425,709		4.28	794,092		7.98
Forest Code 121								
Bolivia	6,924,796	25.83	873,121	12.61	3.26	1,158,275	16.73	4.32
Brazil	6,034,532	22.51	107,617	1.78	0.40	2,880,420	47.73	10.74
Colombia	3,149,043	11.75	738,895	23.46	2.76	782,468	24.85	2.92
Ecuador	763,358	2.85	217,188	28.45	0.81	217,515	28.49	0.81
Peru	7,418,765	27.67	300,470	4.05	1.12	539,719	7.28	2.01
Venezuela	2,518,783	9.39	780,463	30.99	2.91	1,189,227	47.21	4.44
Forest Total	26,809,277	100.00	3,017,754		11.26	6,767,624		25.24

Annex 15
MOIST FOREST PROTECTION IN TROPICAL COUNTRIES OF SOUTH AMERICA

	Forest Area (FA) (ha)	FA % total FA	PAs I–III (ha)	PAs I–III % FA in country	PAs I–III % total FA	PAs I–VIII (ha)	PAs I– VIII % FA in country	PAs I– VIII % total FA
Forest Code 122								
Bolivia	31,786,460	5.93	1,320,418	4.15	0.25	5,122,323	16.11	0.96
Brazil	320,297,277	59.79	6,861,331	2.14	1.28	53,437,051	16.68	9.97
Colombia	44,612,769	8.33	3,055,520	6.85	0.57	10,789,514	24.18	2.01
Ecuador	12,152,469	2.27	1,662,516	13.68	0.31	2,324,978	19.13	0.43
French Guiana	7,329,334	1.37	0	0.00	0.00	0	0.00	0.00
Guyana	18,302,465	3.42	421	0.00	0.00	483	0.00	0.00
Peru	54,530,184	10.18	971,980	1.78	0.18	1,430,160	2.62	0.27
Paraguay	3,566,090	0.67	97,995	2.75	0.02	174,345	4.89	0.03
Suriname	11,055,808	2.06	82,463	0.75	0.02	409,276	3.70	0.08
Venezuela	31,982,053	5.97	2,753,938	8.61	0.51	3,295,507	10.30	0.62
Forest Total	535,614,909	100.00	16,806,582		3.14	76,983,637		14.37
Forest Code 123								
Bolivia	6,116,494	16.86	1,053,026	17.22	2.90	1,143,992	18.70	3.15
Colombia	2,963,029	8.17	419,747	14.17	1.16	562,348	18.98	1.55
French Guiana	42,028	0.12	0	0.00	0.00	0	0.00	0.00
Peru	12,659,835	34.89	650,006	5.13	1.79	1,733,818	13.70	4.78
Suriname	514,683	1.42	521	0.10	0.00	34,271	6.66	0.09
Venezuela	13,961,194	38.47	4,751,355	34.03	13.09	5,734,688	41.08	15.80
Forest Total	36,257,263	100.00	6,874,655		18.94	9,209,117		25.40
Forest Code 130								
French Guiana	48,899	3.91	0	0.00	0.00	0	0.00	0.00
Paraguay	1,182,698	94.55	8,302	0.70	0.66	12,441	1.05	0.99
Forest Total	1,231,597	100.00	8,302		0.66	12,441		0.99
Forest Code 500								
Brazil	10,950,581	67.21	40,108	0.37	0.25	487,214	4.45	2.99
Ecuador	1,081,236	6.64	20,341	1.88	0.12	20,341	1.88	0.12
Peru	983,735	6.04	99,102	10.07	0.61	99,102	10.07	0.61
Suriname	347,072	2.13	0	0.00	0.00	4,358	1.26	0.03
Venezuela	2,926,856	17.96	157,256	5.37	0.97	531,690	18.17	3.26
Forest Total	16,289,480	100.00	316,807		1.95	1,142,705		7.01
Forest Code 510								
Brazil	2,545,728	100.00	53,840	2.11	2.11	53,840	2.11	2.11
Forest Total	2,545,728	100.00	53,840		2.11	53,840		2.11

Annex 15
MOIST FOREST PROTECTION IN TROPICAL COUNTRIES OF SOUTH AMERICA

	Forest Area (FA) (ha)	FA % total FA	PAs I–III (ha)	PAs I–III % FA in country	PAs I–III % total FA	PAs I–VIII (ha)	PAs I– VIII % FA in country	PAs I– VIII % total FA
Forest Code 888								
Guyana	17,493	100.00	0	0.00	0.00	0	0.00	0.00
Forest Total	17,493	100.00	0		0.00	0		0.00
Forest Code 900								
Bolivia	62,345,860	8.29	451,827	0.72	0.06	4,687,120	7.52	0.62
Brazil	496,482,773	65.99	3,737,173	0.75	0.50	19,891,953	4.01	2.64
Colombia	61,752,987	8.21	2,626,871	4.25	0.35	7,818,037	12.66	1.04
Ecuador	10,474,135	1.39	461,907	4.41	0.06	593,896	5.67	0.08
French Guiana	184,358	0.02	0	0.00	0.00	0	0.00	0.00
Guyana	2,521,717	0.34	0	0.00	0.00	9,114	0.36	0.00
Peru	46,380,752	6.16	472,973	1.02	0.06	572,647	1.23	0.08
Paraguay	34,840,796	4.63	1,068,681	3.07	0.14	1,103,054	3.17	0.15
Suriname	975,495	0.13	0	0.00	0.00	97,258	9.97	0.01
Venezuela	35,900,683	4.77	2,597,831	7.24	0.35	4,259,650	11.87	0.57
Forest Total	751,859,556	100.00	11,417,263		1.52	39,032,729		5.19
Forest Code 999								
French Guiana	4,061	3.76	0	0.00	0.00	0	0.00	0.00
Peru	9,877	9.15	0	0.00	0.00	0	0.00	0.00
Paraguay	35,639	33.01	0	0.00	0.00	0	0.00	0.00
Surinam	58,265	53.97	0	0.00	0.00	0	0.00	0.00
Forest Total	107,842	100.00	0		0.00	0		0.00

Annex 16
NATIONAL PROTECTION OF MOIST FORESTS IN SOUTH AMERICA

	Forest Area (FA) (ha)	FA % country area	PAs I–III (ha)	PAs I–III % FA in country	PAs I–VIII (ha)	PAs I–VIII % FA in country
Bolivia, Republic of						
10	1,272,201	1.17	5,677	0.45	254,365	19.99
121	6,924,796	6.37	873,121	12.61	1,158,275	16.73
122	31,786,460	29.23	1,320,418	4.15	5,122,323	16.11
123	6,116,494	5.62	1,053,026	17.22	1,143,992	18.70
900	62,345,860	57.32	451,827	0.72	4,687,120	7.52
County Total	108,445,811	100.00	3,704,069	3.42	12,366,075	11.40
Brazil, Federative Republic of						
10	13,441,507	1.58	166,677	1.24	830,853	6.18
111	1,637,132	0.19	160,253	9.79	160,253	9.79
121	6,034,532	0.71	107,617	1.78	2,880,420	47.73
122	320,297,277	37.62	6,861,331	2.14	53,437,051	16.68
123	0	0.00	0	*****	0	*****
500	10,950,581	1.29	40,108	0.37	487,214	4.45
510	2,545,728	0.30	53,840	2.11	53,840	2.11
900	496,482,773	58.31	3,737,173	0.75	19,891,953	4.01
County Total	851,389,530	100.00	11,126,999	1.31	77,741,584	9.13
Colombia, Republic of						
10	629,071	0.55	10,923	1.74	17,945	2.85
111	367,982	0.32	79,787	21.68	82,325	22.37
121	3,149,043	2.76	738,895	23.46	782,468	24.85
122	44,612,769	39.05	3,055,520	6.85	10,789,514	24.18
123	2,963,029	2.59	419,747	14.17	562,348	18.98
900	61,752,987	54.05	2,626,871	4.25	7,818,037	12.66
County Total	113,474,881	100.00	6,931,743	6.14	20,052,637	17.79
Ecuador, Republic of						
10	195,180	0.76	1,621	0.83	22,932	11.75
111	237,736	0.92	32,081	13.49	32,081	13.49
121	763,358	2.97	217,188	28.45	217,515	28.49
122	12,152,469	47.27	1,662,516	13.68	2,324,978	19.13
500	1,081,236	4.21	20,341	1.88	20,341	1.88
900	10,474,135	40.74	461,907	4.41	593,896	5.67
County Total	24,904,114	100.00	2,395,654	9.62	3,211,743	12.90

Annex 16
NATIONAL PROTECTION OF MOIST FORESTS IN SOUTH AMERICA

	Forest Area (FA) (ha)	FA % country area	PAs I–III (ha)	PAs I–III % FA in country	PAs I–VIII (ha)	PAs I–VIII % FA in country
Guiana, Department of						
10	40,163	0.48	0	0.00	3	0.01
111	94,699	1.13	0	0.00	0	0.00
113	632,116	7.55	0	0.00	0	0.00
122	7,329,334	87.51	0	0.00	0	0.00
123	42,028	0.50	0	0.00	0	0.00
130	48,899	0.58	0	0.00	0	0.00
900	184,358	2.20	0	0.00	0	0.00
999	4,061	0.05	0	0.00	0	0.00
County Total	8,375,658	100.00	0	0.00	3	0.00
Guyana, Republic of						
10	282,049	1.34	0	0.00	0	0.00
122	18,302,465	86.64	421	0.00	483	0.00
888	17,493	0.08	0	0.00	0	0.00
900	2,521,717	11.94	0	0.00	9,114	0.36
County Total	21,123,724	100.00	421	0.00	9,597	0.05
Peru, Republic of						
10	1,923,265	1.48	7,502	0.39	47,095	2.45
111	98,159	0.08	0	0.00	0	0.00
113	5,753,283	4.43	29,922	0.52	29,922	0.52
121	7,418,765	5.72	300,470	4.05	539,719	7.28
122	54,530,184	42.02	971,980	1.78	1,430,160	2.62
123	12,659,835	9.76	650,006	5.13	1,733,818	13.70
500	983,735	0.76	99,102	10.07	99,102	10.07
900	46,380,752	35.74	472,973	1.02	572,647	1.23
999	9,877	0.01	0	0.00	0	0.00
County Total	129,757,855	100.00	2,531,955	1.95	4,452,463	3.43
Paraguay, Republic of						
10	378,266	0.95	15,766	4.17	15,768	4.17
122	3,566,090	8.91	97,995	2.75	174,345	4.89
130	1,182,698	2.96	8,302	0.70	12,441	1.05
500	1	0.00	0	0.00	0	0.00
900	34,840,796	87.09	1,068,681	3.07	1,103,054	3.17
999	35,639	0.09	0	0.00	0	0.00
County Total	40,003,490	100.00	1,190,744	2.98	1,305,608	3.26

Annex 16
NATIONAL PROTECTION OF MOIST FORESTS IN SOUTH AMERICA

	Forest Area (FA) (ha)	FA % country area	PAs I–III (ha)	PAs I–III % FA in country	PAs I–VIII (ha)	PAs I–VIII % FA in country
Suriname, Republic of						
10	312,263	2.13	0	0.00	1,652	0.53
111	108,761	0.74	0	0.00	22,796	20.96
113	1,301,428	8.87	0	0.00	74,716	5.74
122	11,055,808	75.34	82,463	0.75	409,276	3.70
123	514,683	3.51	521	0.10	34,271	6.66
500	347,072	2.37	0	0.00	4,358	1.26
900	975,495	6.65	0	0.00	97,258	9.97
999	58,265	0.40	0	0.00	0	0.00
County Total	14,673,775	100.00	82,984	0.57	644,327	4.39
Venezuela, Republic of						
10	1,083,528	1.19	68,559	6.33	114,807	10.60
111	595,083	0.65	97,548	16.39	190,747	32.05
113	2,254,261	2.47	395,787	17.56	689,454	30.58
121	2,518,783	2.76	780,463	30.99	1,189,227	47.21
122	31,982,053	35.06	2,753,938	8.61	3,295,507	10.30
123	13,961,194	15.30	4,751,355	34.03	5,734,688	41.08
500	2,926,856	3.21	157,256	5.37	531,690	18.17
900	35,900,683	39.36	2,597,831	7.24	4,259,650	11.87
County Total	91,222,441	100.00	11,602,737	12.72	16,005,770	17.55

Annex 17
MAJOR ECOFLORISTIC ZONE PROTECTION IN COUNTRIES OF CENTRAL AMERICA AND THE CARIBBEAN

	Major Zone area (ha)	MZ area % total MZ area	PAs I–III (ha)	PAs I–III % MZ in country	PAs I–III % total MZ	PAs I–VIII (ha)	PAs I–VIII % MZ in country	PAs I– VIII % total MZ
Major Zone 1								
Costa Rica	846,633	24.78	8,942	1.06	0.26	63,928	7.55	1.87
Guatemala	199,846	5.85	0	0.00	0.00	0	0.00	0.00
Honduras	38,924	1.14	0	0.00	0.00	0	0.00	0.00
Nicaragua	1,291,572	37.80	232,031	17.97	6.79	288,698	22.35	8.45
Panama	1,039,853	30.43	103,461	9.95	3.03	233,980	22.50	6.85
MZ Total	3,416,828	100.00	344,434		10.08	586,606		17.17
Major Zone 2								
Belize	1,651,175	6.14	61,110	3.70	0.23	426,344	25.82	1.58
Costa Rica	1,387,478	5.16	73,650	5.31	0.27	245,679	17.71	0.91
Cuba	672,814	2.50	111,392	16.56	0.41	114,270	16.98	0.42
Dominica	71,305	0.27	0	0.00	0.00	9,267	13.00	0.03
Dominican Republic	1,500,833	5.58	98,383	6.56	0.37	111,793	7.45	0.42
El Salvador	548,271	2.04	0	0.00	0.00	0	0.00	0.00
Guadeloupe	162,640	0.61	0	0.00	0.00	11,950	7.34	0.04
Guatemala	3,581,998	13.32	465,937	13.01	1.73	481,032	13.43	1.79
Haiti	512,646	1.91	0	0.00	0.00	0	0.00	0.00
Honduras	3,090,951	11.49	52,759	1.71	0.20	246,015	7.96	0.91
Jamaica	562,200	2.09	0	0.00	0.00	41,505	7.38	0.15
Martinique	108,529	0.40	0	0.00	0.00	63,269	58.30	0.24
Mexico	3,624,990	13.47	167,659	4.63	0.62	542,794	14.97	2.02
Montserrat	6,633	0.02	0	0.00	0.00	0	0.00	0.00
Nicaragua	6,039,739	22.45	192,449	3.19	0.72	1,278,087	21.16	4.75
Panama	3,142,410	11.68	185,018	5.89	0.69	366,755	11.67	1.36
Puerto Rico	138,467	0.51	0	0.00	0.00	2,180	1.57	0.01
Saint Lucia	56,304	0.21	0	0.00	0.00	0	0.00	0.00
Saint Vincent and the Grenadines	33,373	0.12	0	0.00	0.00	0	0.00	0.00
Trinidad and Tobago	7,576	0.03	0	0.00	0.00	0	0.00	0.00
Virgin islands (British)	1,327	0.00	0	0.00	0.00	219	16.50	0.00
MZ Total	26,901,859	100.00	1,408,357		5.24	3,941,159		14.65
Major Zone 4								
Antigua and Barbuda	42,414	0.09	2,801	6.60	0.01	4,062	9.58	0.01
Bahamas	788,932	1.61	0	0.00	0.00	0	0.00	0.00
Barbados	41,002	0.08	0	0.00	0.00	0	0.00	0.00
Belize	232,630	0.48	18,984	8.16	0.04	105,769	45.47	0.22
Cayman islands	22,918	0.05	1,574	6.87	0.00	2,284	9.97	0.00
Costa Rica	169	0.00	0	0.00	0.00	0	0.00	0.00

Annex 17
MAJOR ECOFLORISTIC ZONE PROTECTION IN COUNTRIES OF CENTRAL AMERICA AND THE CARIBBEAN

	Major Zone area (ha)	MZ area % total MZ area	PAs I–III (ha)	PAs I–III % MZ in country	PAs I–III % total MZ	PAs I–VIII (ha)	PAs I–VIII % MZ in country	PAs I– VIII % total MZ
Cuba	7,955,363	16.28	13,025	0.16	0.03	257,788	3.24	0.53
Dominican Republic	1,218,802	2.49	82,495	6.77	0.17	85,243	6.99	0.17
El Salvador	200,411	0.41	204	0.10	0.00	204	0.10	0.00
Grenada	30,542	0.06	0	0.00	0.00	0	0.00	0.00
Guatemala	725,347	1.48	173,533	23.92	0.36	189,728	26.16	0.39
Haiti	995,201	2.04	5,637	0.57	0.01	5,637	0.57	0.01
Honduras	1,087,827	2.23	11,414	1.05	0.02	114,546	10.53	0.23
Jamaica	513,394	1.05	0	0.00	0.00	68,786	13.40	0.14
Mexico	33,203,725	67.94	482,167	1.45	0.99	678,035	2.04	1.39
Montserrat	3,222	0.01	0	0.00	0.00	0	0.00	0.00
Netherlands Antilles	1,986	0.00	0	0.00	0.00	0	0.00	0.00
Nicaragua	698,507	1.43	479	0.07	0.00	50,475	7.23	0.10
Panama	476,452	0.97	13,100	2.75	0.03	33,799	7.09	0.07
Puerto Rico	410,434	0.84	0	0.00	0.00	13,987	3.41	0.03
Saint Kitts and Nevis	26,440	0.05	0	0.00	0.00	0	0.00	0.00
Saint Vincent and the Grenadines	854	0.00	0	0.00	0.00	0	0.00	0.00
Trinidad and Tobago	148,982	0.30	465	0.31	0.00	465	0.31	0.00
Virgin Islands (British)	12,232	0.03	145	1.19	0.00	375	3.07	0.00
Virgin Islands (U.S.)	33,439	0.07	0	0.00	0.00	0	0.00	0.00
MZ Total	48,871,225	100.00	806,023		1.65	1,611,183		3.30
Major Zone 5								
Bahamas	301,645	3.64	0	0.00	0.00	0	0.00	0.00
Cuba	15,380	0.19	0	0.00	0.00	0	0.00	0.00
Haiti	2,006	0.02	0	0.00	0.00	0	0.00	0.00
Jamaica	65	0.00	0	0.00	0.00	0	0.00	0.00
Mexico	7,953,539	96.09	0	0.00	0.00	24,325	0.31	0.29
Turks and Caicos Islands	4,513	0.05	0	0.00	0.00	0	0.00	0.00
MZ Total	8,277,148	100.00	0		0.00	24,325		0.29
Major Zone 6								
Bahamas	28,953	0.68	0	0.00	0.00	0	0.00	0.00
Mexico	4,242,290	99.32	12,235	0.29	0.29	12,235	0.29	0.29
MZ Total	4,271,243	100.00	12,235		0.29	12,235		0.29
Major Zone 7								
Bahamas	22,197	0.14	0	0.00	0.00	0	0.00	0.00
Mexico	15,284,027	99.60	140,949	0.92	0.92	2,143,246	14.02	13.97
Turks and Caicos Islands	38,523	0.25	338	0.88	0.00	338	0.88	0.00
MZ Total	15,344,747	100.00	141,287		0.92	2,143,584		13.97

Annex 17
MAJOR ECOFLORISTIC ZONE PROTECTION IN COUNTRIES OF CENTRAL AMERICA AND THE CARIBBEAN

	Major Zone area (ha)	MZ area % total MZ area	PAs I–III (ha)	PAs I–III % MZ in country	PAs I–III % total MZ	PAs I–VIII (ha)	PAs I–VIII % MZ in country	PAs I– VIII % total MZ
Major Zone 8								
Bahamas	36,665	0.08	0	0.00	0.00	0	0.00	0.00
Belize	292,419	0.62	68,807	23.53	0.15	129,719	44.36	0.28
Costa Rica	2,865,275	6.11	402,882	14.06	0.86	874,430	30.52	1.87
Cuba	1,873,621	4.00	24,615	1.31	0.05	372,379	19.87	0.79
Dominican Republic	1,855,906	3.96	162,869	8.78	0.35	199,366	10.74	0.43
El Salvador	1,282,689	2.74	6,940	0.54	0.01	14,473	1.13	0.03
Guatemala	5,846,906	12.47	678,987	11.61	1.45	779,045	13.32	1.66
Haiti	1,065,757	2.27	384	0.04	0.00	384	0.04	0.00
Honduras	6,716,687	14.33	205,006	3.05	0.44	213,807	3.18	0.46
Jamaica	12,652	0.03	0	0.00	0.00	115	0.91	0.00
Martinique	274	0.00	0	0.00	0.00	246	89.78	0.00
Mexico	18,123,861	38.66	260,103	1.44	0.55	434,900	2.40	0.93
Nicaragua	3,849,700	8.21	31,988	0.83	0.07	568,302	14.76	1.21
Panama	2,717,173	5.80	637,022	23.44	1.36	825,910	30.40	1.76
Puerto Rico	342,498	0.73	0	0.00	0.00	8,603	2.51	0.02
MZ Total	46,882,083	100.00	2,479,603		5.29	4,421,679		9.43
Major Zone 9								
Cuba	384,952	0.35	18,435	4.79	0.02	33,681	8.75	0.03
Dominican Republic	203,049	0.18	73,100	36.00	0.07	73,100	36.00	0.07
Guatemala	404,962	0.36	0	0.00	0.00	0	0.00	0.00
Haiti	115,037	0.10	0	0.00	0.00	0	0.00	0.00
Honduras	273,651	0.25	201	0.07	0.00	634	0.23	0.00
Jamaica	3,105	0.00	0	0.00	0.00	1,104	35.56	0.00
Mexico	109,746,687	98.75	451,485	0.41	0.41	1,027,090	0.94	0.92
MZ Total	111,131,443	100.00	543,221		0.49	1,135,609		1.02
Major Zone 10								
Costa Rica	20,767	1.66	9,133	43.98	0.73	9,252	44.55	0.74
Guatemala	68,888	5.50	0	0.00	0.00	0	0.00	0.00
Mexico	1,161,782	92.84	79,828	6.87	6.38	79,858	6.87	6.38
MZ Total	1,251,437	100.00	88,961		7.11	89,110		7.12
Major Zone 11								
Mexico	2,097,450	100.00	3,648	0.17	0.17	3,648	0.17	0.17
MZ Total	2,097,450	100.00	3,648		0.17	3,648		0.17
Regional Totals	268,445,463		5,827,769			13,969,138		5.20

Annex 18
NATIONAL PROTECTION OF MAJOR ECOFLORISTIC ZONES IN CENTRAL AMERICA AND THE CARIBBEAN

Major Zone code	Major Zone area (ha)	Major Zone area % country area	PAs I–III (ha)	PAs I–III % country area	PAs I–VIII (ha)	PAs I– VIII % country area
Antigua and Barbuda						
4	42,414	100.00	2,801	6.60	4,062	9.58
Country Total	42,414	100.00	3,040	7.17	4,470	10.54
Bahamas						
4	788,932	66.95	0	0.00	0	0.00
5	301,645	25.60	0	0.00	0	0.00
6	28,953	2.46	0	0.00	0	0.00
7	22,197	1.88	0	0.00	0	0.00
8	36,665	3.11	0	0.00	0	0.00
Country Total	1,178,392	100.00	0	0.00	0	0.00
Barbados						
4	41,002	100.00	0	0.00	0	0.00
Country Total	41,002	100.00	0	0.00	0	0.00
Belize						
2	1,651,175	75.87	61,110	3.70	426,344	25.82
4	232,630	10.69	18,984	8.16	105,769	5.61
8	292,419	13.44	68,807	23.53	129,719	5.96
Country Total	2,176,224	100.00	149,005	6.85	662,571	30.45
Cayman Islands						
4	22,918	100.00	1,574	6.87	2,284	9.97
Country Total	22,918	100.00	1,741	7.60	2,662	11.62
Costa Rica						
1	846,633	16.53	8,942	1.06	63,928	7.55
2	1,387,478	27.10	73,650	5.31	245,679	11.00
4	169	0 00	0	0.00	0	0.00
8	2,865,275	55.96	402,882	14.06	874,430	17.15
10	20,767	0.41	9,133	43.98	9,252	0.18
Country Total	5,120,322	100.00	495,097	9.67	1,194,787	23.33
Cuba						
2	672,814	6.17	111,392	16.56	114,270	16.98
4	7,955,363	72.97	13,025	0.16	257,788	2.99
5	15,380	0.14	0	0.00	0	0.00
8	1,873,621	17.19	24,615	1.31	372,379	3.54

Annex 18
NATIONAL PROTECTION OF MAJOR ECOFLORISTIC ZONES IN CENTRAL AMERICA AND THE CARIBBEAN

Major Zone code	Major Zone area (ha)	Major Zone area % country area	PAs I–III (ha)	PAs I–III % country area	PAs I–VIII (ha)	PAs I– VIII % country area
9	384,952	3.53	18,435	4.79	33,681	0.31
Country Total	10,902,130	100.00	171,154	1.57	789,347	7.24
Dominica						
2	71,305	100.00	0	0.00	9,267	13.00
Country Total	71,305	100.00	0	0.00	9,267	13.00
Dominican Republic						
2	1,500,833	31.41	98,383	6.56	111,793	7.45
4	1,218,802	25.51	82,495	6.77	85,243	3.13
8	1,855,906	38.84	162,869	8.78	199,366	4.36
9	203,049	4.25	73,100	36.00	73,100	1.53
Country Total	4,778,590	100.00	439,963	9.21	492,743	10.31
El Salvador						
2	548,271	26.99	0	0.00	0	0.00
4	200,411	9.87	204	0.10	204	0.03
8	1,282,689	63.14	6,940	0.54	14,473	0.71
Country Total	2,031,371	100.00	7,144	0.35	14,677	0.72
Grenada						
4	30,542	100.00	0	0.00	0	0.00
Country Total	30,542	100.00	0	0.00	0	0.00
Guadeloupe						
2	162,840	100.00	0	0.00	11,950	7.34
Country Total	162,840	100.00	0	0.00	12,135	7.45
Guatemala						
1	199,846	1.85	0	0.00	0	0.00
2	3,581,998	33.08	465,937	13.01	481,032	12.72
4	725,347	6.70	173,533	23.92	189,728	4.21
8	5,846,906	54.00	678,987	11.61	779,045	7.52
9	404,962	3.74	0	0.00	0	0.00
10	68,888	0.64	0	0.00	0	0.00
Country Total	10,827,947	100.00	1,319,747	12.19	1,453,661	13.43
Haiti						
2	512,646	19.05	0	0.00	0	0.00

Annex 18
NATIONAL PROTECTION OF MAJOR ECOFLORISTIC ZONES IN CENTRAL AMERICA AND THE CARIBBEAN

Major Zone code	Major Zone area (ha)	Major Zone area % country area	PAs I–III (ha)	PAs I–III % country area	PAs I–VIII (ha)	PAs I– VIII % country area
4	995,201	36.99	5,637	0.57	5,637	0.37
5	2,006	0.07	0	0.00	0	0.00
8	1,065,757	39.61	384	0.04	384	0.01
9	115,037	4.28	0	0.00	0	0.00
Country Total	2,690,647	100.00	7,463	0.28	7,463	0.28
Honduras						
1	38,924	0.35	0	0.00	0	0.00
2	3,090,951	27.58	52,759	1.71	246,015	7.86
4	1,087,827	9.71	11,414	1.05	114,546	2.72
8	6,716,687	59.93	205,006	3.05	213,807	1.96
9	273,651	2.44	201	0.07	634	0.01
Country Total	11,208,040	100.00	269,423	2.40	601,318	5.37
Jamaica						
2	562,200	51.51	0	0.00	41,505	7.38
4	513,394	47.04	0	0.00	68,786	6.40
5	65	0.01	0	0.00	0	0.00
8	12,652	1.16	0	0.00	115	0.01
9	3,105	0.28	0	0.00	1,104	0.10
Country Total	1,091,416	100.00	0	0.00	111,849	10.25
Martinique						
2	108,529	99.75	0	0.00	63,269	58.30
8	274	0.25	0	0.00	246	0.23
Country Total	108,803	100.00	0	0.00	66,057	60.71
Mexico						
2	3,624,990	1.85	167,659	4.63	542,794	14.97
4	33,203,725	16.99	482,167	1.45	678,035	1.84
5	7,953,539	4.07	0	0.00	24,325	0.05
6	4,242,290	2.17	12,235	0.29	12,235	0.02
7	15,284,027	7.82	140,949	0.92	2,143,246	3.33
8	18,123,861	9.27	260,103	1.44	434,900	0.53
9	109,746,687	56.15	451,485	0.41	1,027,090	0.53
10	1,161,782	0.59	79,828	6.87	79,858	0.04
11	2,097,450	1.07	3,648	0.17	3,648	0.00
Country Total	195,438,351	99.98	1,639,402	0.84	5,012,147	2.56

Annex 18
NATIONAL PROTECTION OF MAJOR ECOFLORISTIC ZONES IN CENTRAL AMERICA AND THE CARIBBEAN

Major Zone code	Major Zone area (ha)	Major Zone area % country area	PAs I–III (ha)	PAs I–III % country area	PAs I–VIII (ha)	PAs I– VIII % country area
Montserrat						
2	6,633	67.31	0	0.00	0	0.00
4	3,222	32.69	0	0.00	0	0.00
Country Total	9,855	100.00	0	0.00	0	0.00
Netherlands Antilles						
4	1,986	100.00	0	0.00	0	0.00
Country Total	1,986	100.00	0	0.00	0	0.00
Nicaragua						
1	1,291,572	10.87	232,031	17.97	288,698	22.35
2	6,039,739	50.84	192,449	3.19	1,278,087	17.43
4	698,507	5.88	479	0.07	50,475	0.63
8	3,849,700	32.41	31,988	0.83	568,302	4.78
Country Total	11,879,518	100.00	478,532	4.03	2,220,997	18.70
Panama						
1	1,039,853	14.10	103,461	9.95	233,980	22.50
2	3,142,410	42.60	185,018	5.89	366,755	8.77
4	476,452	6.46	13,100	2.75	33,799	0.73
8	2,717,173	36.84	637,022	23.44	825,910	11.20
Country Total	7,375,888	100.00	967,646	13.12	1,495,672	20.28
Puerto Rico						
2	138,467	15.53	0	0.00	2,180	1.57
4	410,434	46.04	0	0.00	13,987	2.55
8	342,498	38.42	0	0.00	8,603	0.97
Country Total	891,399	99.99	0	0.00	24,859	2.79
Saint Kitts and Nevis						
4	26,440	100.00	0	0.00	0	0.00
Country Total	26,440	100.00	0	0.00	0	0.00
Saint Lucia						
2	56,304	100.00	0	0.00	0	0.00
Country Total	56,304	100.00	0	0.00	0	0.00
Saint Vincent and the Grer						
2	33,373	97.50	0	0.00	0	0.00

Annex 18
NATIONAL PROTECTION OF MAJOR ECOFLORISTIC ZONES IN CENTRAL AMERICA AND THE CARIBBEAN

Major Zone code	Major Zone area (ha)	Major Zone area % country area	PAs I–III (ha)	PAs I–III % country area	PAs I–VIII (ha)	PAs I– VIII % country area
4	854	2.50	0	0.00	0	0.00
Country Total	34,227	100.00	0	0.00	0	0.00
Trinidad and Tobago						
2	7,576	4.84	0	0.00	0	0.00
4	148,982	95.16	465	0.31	465	0.30
Country Total	156,558	100.00	487	0.31	541	0.35
Turks and Caicos Islands						
5	4,513	10.49	0	0.00	0	0.00
7	38,523	89.51	338	0.88	338	0.79
Country Total	43,036	100.00	478	1.11	478	1.11
Virgin Islands (British)						
2	1,327	9.79	0	0.00	219	16.50
4	12,232	90.21	145	1.19	375	2.77
Country Total	13,559	100.00	169	1.25	643	4.74
Virgin Islands (U.S.)						
4	33,439	100.00	0	0.00	0	0.00
Country Total	33,439	100.00	0	0.00	0	0.00

Annex 19
MOIST FOREST PROTECTION IN COUNTRIES OF CENTRAL AMERICA AND THE CARIBBEAN

	Forest Area (FA) (ha)	FA % total FA	PAs I–III (ha)	PAs I–III % FA in country	PAs I–III % total FA	PAs I–VIII (ha)	PAs I– VIII % FA in country	PAs I– VIII % total FA
Forest Code 10								
Belize	26,001	1.53	12	0.05	0.00	5,262	20.24	0.31
Costa Rica	12,823	0.75	0	0.00	0.00	2,959	23.08	0.17
Cuba	98,969	5.81	0	0.00	0.00	17,643	17.83	1.04
El Salvador	34,283	2.01	0	0.00	0.00	0	0.00	0.00
Guatemala	71,872	4.22	10,447	14.54	0.61	21,862	30.42	1.28
Honduras	68,835	4.04	0	0.00	0.00	22,538	32.74	1.32
Jamaica	695	0.04	0	0.00	0.00	14	2.01	0.00
Martinique	188	0.01	0	0.00	0.00	102	54.26	0.01
Mexico	368,086	21.62	3,706	1.01	0.22	16,345	4.44	0.96
Nicaragua	925,592	54.36	15,946	1.72	0.94	23,284	2.52	1.37
Panama	93,923	5.52	4,513	4.81	0.27	5,220	5.56	0.31
Trinidad and Tobago	1,576	0.09	0	0.00	0.00	0	0.00	0.00
Forest Total	1,702,843	100.00	34,624		2.03	115,229		6.77
Forest Code 111								
Bahamas	18	0.00	0	0.00	0.00	0	0.00	0.00
Belize	53,459	3.65	0	0.00	0.00	12,063	22.56	0.82
Costa Rica	52,948	3.62	982	1.85	0.07	1,182	2.23	0.08
Cuba	766,380	52.39	17,351	2.26	1.19	43,743	5.71	2.99
El Salvador	44,508	3.04	0	0.00	0.00	0	0.00	0.00
Guatemala	16,138	1.10	0	0.00	0.00	2,698	16.72	0.18
Honduras	231,091	15.80	2,532	1.10	0.17	83,217	36.01	5.69
Jamaica	1,926	0.13	0	0.00	0.00	6	0.31	0.00
Martinique	2,244	0.15	0	0.00	0.00	1,092	48.66	0.07
Nicaragua	94,266	6.44	0	0.00	0.00	21,623	22.94	1.48
Panama	180,080	12.31	1,597	0.89	0.11	12,294	6.83	0.84
Trinidad and Tobago	4,675	0.32	0	0.00	0.00	0	0.00	0.00
Forest Total	1,447,733	100.00	22,462		1.54	177,918		12.29
Forest Code 112								
Nicaragua	77,172	100.00	0	0.00	0.00	44,547	57.72	57.72
Forest Total	77,172	100.00	0		0.00	44,547		57.72
Forest Code 113								
Belize	49,388	3.20	779	1.58	0.05	6,873	13.92	0.45
Cuba	358,859	23.25	17,326	4.83	1.12	17,380	4.84	1.13
Guatemala	556,352	36.04	155,330	27.92	10.06	163,160	29.33	10.57
Jamaica	3,367	0.22	0	0.00	0.00	104	3.09	0.01

Annex 19
MOIST FOREST PROTECTION IN COUNTRIES OF CENTRAL AMERICA AND THE CARIBBEAN

	Forest Area (FA) (ha)	FA % total FA	PAs I–III (ha)	PAs I–III % FA in country	PAs I–III % total FA	PAs I–VIII (ha)	PAs I– VIII % FA in country	PAs I– VIII % total FA
Mexico	14,460	0.94	14,460	100.00	0.94	14,460	100.00	0.94
Nicaragua	556,370	36.04	0	0.00	0.00	108,104	19.43	7.00
Trinidad and Tobago	4,917	0.32	0	0.00	0.00	0	0.00	0.00
Forest Total	1,543,713	100.00	187,895		12.17	310,081		20.09
Forest Code 120								
Martinique	36,487	100.00	0	0.00	0.00	25,971	71.18	71.18
Forest Total	36,487	100.00	0		0.00	25,971		71.18
Forest Code 121								
Costa Rica	103,670	2.78	59,887	57.77	1.61	92,059	88.80	2.47
Cuba	71,628	1.92	1,198	1.67	0.03	56,577	78.99	1.52
El Salvador	36,322	0.97	439	1.21	0.01	2,829	7.79	0.08
Guatemala	1,020,807	27.40	2,418	0.24	0.06	23,465	2.30	0.63
Honduras	1,278,504	34.32	55,233	4.32	1.48	55,288	4.32	1.48
Jamaica	2,802	0.08	0	0.00	0.00	2,305	82.26	0.06
Mexico	560,162	15.04	1,243	0.22	0.03	18,172	3.24	0.49
Nicaragua	628,939	16.88	53,493	8.51	1.44	369,994	58.83	9.93
Panama	21,903	0.59	20,297	92.67	0.54	20,297	92.67	0.54
Trinidad and Tobago	740	0.02	0	0.00	0.00	0	0.00	0.00
Forest Total	3,725,477	100.00	194,208		5.21	640,986		17.21
Forest Code 122								
Belize	1,422,817	5.22	140,995	9.91	0.52	515,685	36.24	1.89
Costa Rica	1,030,590	3.78	165,130	16.02	0.61	463,433	44.97	1.70
Cuba	783,279	2.87	70,892	9.05	0.26	109,499	13.98	0.40
El Salvador	74,583	0.27	2,201	2.95	0.01	2,201	2.95	0.01
Guatemala	2,791,282	10.23	945,547	33.88	3.47	997,806	35.75	3.66
Honduras	1,161,291	4.26	3,856	0.33	0.01	11,357	0.98	0.04
Mexico	13,343,490	48.92	547,428	4.10	2.01	1,097,874	8.23	4.03
Niceragua	3,008,714	11.03	352,735	11.72	1.29	1,256,422	41.76	4.61
Panama	3,550,186	13.02	781,125	22.00	2.86	1,141,845	32.16	4.19
Trinidad and Tobago	109,799	0.40	0	0.00	0.00	0	0.00	0.00
Forest Total	27,276,031	100.00	3,009,909		11.04	5,596,122		20.52
Forest Code 123								
Costa Rica	317,552	30.78	152,442	48.01	14.77	269,699	84.93	26.14
Cuba	251,251	24.35	11,645	4.63	1.13	63,529	25.29	6.16
Jamaica	266,333	25.81	0	0.00	0.00	50,746	19.05	4.92

Annex 19
MOIST FOREST PROTECTION IN COUNTRIES OF CENTRAL AMERICA AND THE CARIBBEAN

	Forest Area (FA) (ha)	FA % total FA	PAs I–III (ha)	PAs I–III % FA in country	PAs I–III % total FA	PAs I–VIII (ha)	PAs I–VIII % FA in country	PAs I–VIII % total FA
Panama	172,320	16.70	81,997	47.58	7.95	97,007	56.29	9.40
Trinidad and Tobago	24,350	2.36	0	0.00	0.00	0	0.00	0.00
Forest Total	1,031,806	100.00	246,084		23.85	480,981		46.62
Forest Code 130								
Trinidad and Tobago	19,253	100.00	0	0.00	0.00	0	0.00	0.00
Forest Total	19,253	100.00	0		0.00	0		0.00
Forest Code 131								
Jamaica	194	65.54	0	0.00	0.00	144	74.23	48.65
Trinidad and Tobago	102	34.46	0	0.00	0.00	0	0.00	0.00
Forest Total	296	100.00	0		0.00	144		48.65
Forest Code 133								
Jamaica	8,144	100.00	0	0.00	0.00	1,693	20.79	20.79
Forest Total	8,144	100.00	0		0.00	1,693		20.79
Forest Code 500								
Costa Rica	12,159	0.06	4,720	38.82	0.02	4,882	40.15	0.03
Jamaica	36,561	0.19	0	0.00	0.00	381	1.04	0.00
Mexico	19,114,177	98.44	39,993	0.21	0.21	65,536	0.34	0.34
Nicaragua	250,726	1.29	3,057	1.22	0.02	57,076	22.76	0.29
Trinidad and Tobago	3,537	0.02	0	0.00	0.00	0	0.00	0.00
Forest Total	19,417,160	100.00	47,770		0.25	127,875		0.66
Forest Code 510								
Belize	134,788	0.35	5,900	4.38	0.02	64,815	48.09	0.17
Cuba	271,879	0.70	7,683	2.83	0.02	15,201	5.59	0.04
Guatemala	425,415	1.10	0	0.00	0.00	780	0.18	0.00
Honduras	2,833,558	7.30	50,849	1.79	0.13	79,003	2.79	0.20
Mexico	34,039,389	87.65	410,490	1.21	1.06	595,357	1.75	1.53
Nicaragua	1,128,399	2.91	0	0.00	0.00	47,117	4.18	0.12
Forest Total	38,833,428	100.00	474,922		1.22	802,273		2.07
Forest Code 888								
Belize	57	0.00	54	94.74	0.00	54	94.74	0.00
Guatemala	518,205	38.92	79,150	15.27	5.94	81,771	15.78	6.14
Jamaica	76,769	5.77	0	0.00	0.00	16,528	21.53	1.24
Mexico	736,542	55.31	499	0.07	0.04	499	0.07	0.04

Annex 19
MOIST FOREST PROTECTION IN COUNTRIES OF CENTRAL AMERICA AND THE CARIBBEAN

	Forest Area (FA) (ha)	FA % total FA	PAs I–III (ha)	PAs I–III % FA in country	PAs I–III % total FA	PAs I–VIII (ha)	PAs I– VIII % FA in country	PAs I– VIII % total FA
Forest Total	1,331,573	100.00	79,703		5.99	98,852		7.42
Forest Code 900								
Aruba	18,565	0.01	0	0.00	0.00	0	0.00	0.00
Belize	482,408	0.29	1,161	0.24	0.00	56,540	11.72	0.03
Costa Rica	3,606,943	2.20	111,936	3.10	0.07	360,573	10.00	0.22
Cuba	8,508,862	5.18	45,059	0.53	0.03	465,717	5.47	0.28
El Salvador	1,853,473	1.13	4,504	0.24	0.00	9,647	0.52	0.01
Guatemala	5,456,309	3.32	126,855	2.32	0.08	162,119	2.97	0.10
Honduras	5,605,431	3.41	156,436	2.79	0.10	349,398	6.23	0.21
Jamaica	707,172	0.43	0	0.00	0.00	39,928	5.65	0.02
Martinique	70,746	0.04	0	0.00	0.00	38,892	54.97	0.02
Mexico	127,739,104	77.80	621,583	0.49	0.38	3,192,651	2.50	1.94
Netherlands Antilles	73,818	0.04	0	0.00	0.00	0	0.00	0.00
Nicaragua	6,138,533	3.74	53,301	0.87	0.03	283,843	4.62	0.17
Panama	3,501,111	2.13	78,117	2.23	0.05	218,839	6.25	0.13
Trinidad and Tobago	308,901	0.19	0	0.00	0.00	0	0.00	0.00
Venezuela	125,551	0.08	0	0.00	0.00	0	0.00	0.00
Forest Total	164,196,927	100.00	1,198,952		0.73	5,178,147		3.15
Forest Code 999								
Honduras	99,324	74.00	517	0.52	0.39	517	0.52	0.39
Mexico	34,897	26.00	0	0.00	0.00	397	1.14	0.30
Forest Total	134,221	100.00	517		0.39	914		0.68

Annex 20
NATIONAL PROTECTION OF MOIST FORESTS IN CENTRAL AMERICA AND THE CARIBBEAN

	Forest Area (FA) (ha)	FA % country area	PAs I–III (ha)	PAs I–III % FA in country	PAs I–VIII (ha)	PAs I–VIII % FA in country
Bahamas, Commonwealth of the						
111	18	0.00	0	0.00	0	0.00
County Total	18	100.00	0	0.00	0	0.00
Belize						
10	26,001	1.19	12	0.05	5,262	20.24
111	53,459	2.46	0	0.00	12,063	22.56
113	49,388	2.27	779	1.58	6,873	13.92
122	1,422,817	65.38	140,995	9.91	515,685	36.24
510	134,788	6.19	5,900	4.38	64,815	48.09
888	57	0.00	54	94.74	54	94.74
900	482,408	22.17	1,161	0.24	56,540	11.72
County Total	2,168,918	100.00	149,005	6.87	662,571	30.55
Costa Rica, Republic of						
10	12,823	0.25	0	0.00	2,959	23.08
111	52,948	1.03	982	1.85	1,182	2.23
121	103,670	2.02	59,887	57.77	92,059	88.80
122	1,030,590	20.13	165,130	16.02	463,433	44.97
123	317,552	6.20	152,442	48.01	269,699	84.93
500	12,159	0.24	4,720	38.82	4,882	40.15
900	3,606,943	70.44	111,936	3.10	360,573	10.00
County Total	5,136,685	100.00	495,097	9.64	1,194,787	23.26
Cuba, Republic of						
10	98,969	0.91	0	0.00	17,643	17.83
111	766,380	7.03	17,351	2.26	43,743	5.71
113	358,859	3.29	17,326	4.83	17,380	4.84
121	71,628	0.66	1,198	1.67	56,577	78.99
122	783,279	7.18	70,892	9.05	109,499	13.98
123	251,251	2.30	11,645	4.63	63,529	25.29
510	271,879	2.49	7,683	2.83	15,201	5.59
900	8,508,862	78.05	45,059	0.53	465,717	5.47
County Total	11,111,107	100.00	171,154	1.54	789,347	7.10
El Salvador, Republic of						
10	34,283	1.69	0	0.00	0	0.00
111	44,508	2.19	0	0.00	0	0.00
121	36,322	1.79	439	1.21	2,829	7.79

Annex 20
NATIONAL PROTECTION OF MOIST FORESTS IN CENTRAL AMERICA AND THE CARIBBEAN

	Forest Area (FA) (ha)	FA % country area	PAs I–III (ha)	PAs I–III % FA in country	PAs I–VIII (ha)	PAs I–VIII % FA in country
122	74,583	3.67	2,201	2.95	2,201	2.95
900	1,853,473	91.24	4,504	0.24	9,647	0.52
County Total	2,043,169	100.00	7,144	0.35	14,677	0.72
Guatemala, Republic of						
10	71,872	0.66	10,447	14.54	21,862	30.42
111	16,138	0.15	0	0.00	2,698	16.72
113	556,352	5.14	155,330	27.92	163,160	29.33
121	1,020,807	9.43	2,418	0.24	23,465	2.30
122	2,791,282	25.78	945,547	33.88	997,806	35.75
510	425,415	3.93	0	0.00	780	0.18
888	518,205	4.79	79,150	15.27	81,771	15.78
900	5,456,309	50.39	126,855	2.32	162,119	2.97
County Total	10,856,380	100.00	1,319,747	12.16	1,453,661	13.39
Honduras, Republic of						
10	68,835	0.61	0	0.00	22,538	32.74
111	231,091	2.06	2,532	1.10	83,217	36.01
121	1,278,504	11.41	55,233	4.32	55,288	4.32
122	1,161,291	10.36	3,856	0.33	11,357	0.98
510	2,833,558	25.28	50,849	1.79	79,003	2.79
900	5,605,431	50.01	156,436	2.79	349,398	6.23
999	99,324	0.89	517	0.52	517	0.52
County Total	11,278,034	100.00	269,423	2.39	601,318	5.33
Jamaica						
10	695	0.06	0	0.00	14	2.01
111	1,926	0.18	0	0.00	6	0.31
113	3,367	0.31	0	0.00	104	3.09
121	2,802	0.26	0	0.00	2,305	82.26
123	266,333	24.40	0	0.00	50,746	19.05
131	194	0.02	0	0.00	144	74.23
133	8,144	0.75	0	0.00	1,693	20.79
500	36,561	3.35	0	0.00	381	1.04
888	76,769	7.03	0	0.00	16,528	21.53
900	707,172	64.79	0	0.00	39,928	5.65
County Total	1,103,963	100.00	0	0.00	111,849	10.13

Annex 20
NATIONAL PROTECTION OF MOIST FORESTS IN CENTRAL AMERICA AND THE CARIBBEAN

	Forest Area (FA) (ha)	FA % country area	PAs I–III (ha)	PAs I–III % FA in country	PAs I–VIII (ha)	PAs I–VIII % FA in country
Martinique, Department of						
10	188	0.17	0	0.00	102	54.26
111	2,244	2.06	0	0.00	1,092	48.66
120	36,487	33.53	0	0.00	25,971	71.18
900	70,746	65.02	0	0.00	38,892	54.97
County Total	109,665	100.00	0	0.00	66,057	60.24
United Mexican States						
10	368,086	0.19	3,706	1.01	16,345	4.44
113	14,460	0.01	14,460	100.00	14,460	100.00
121	560,162	0.29	1,243	0.22	18,172	3.24
122	13,343,490	6.83	547,428	4.10	1,097,874	8.23
500	19,114,177	9.78	39,993	0.21	65,536	0.34
510	34,039,389	17.42	410,490	1.21	595,357	1.75
888	736,542	0.38	499	0.07	499	0.07
900	127,739,104	65.36	621,583	0.49	3,192,651	2.50
999	34,897	0.02	0	0.00	397	1.14
County Total	195,950,307	100.00	1,639,402	0.84	5,012,147	2.56
Netherlands Antilles						
900	73,818	3716.90	0	0.00	0	0.00
County Total	73,818	100.00	0	0.00	0	0.00
Nicaragua, Republic of						
10	925,592	7.79	15,946	1.72	23,284	2.52
111	94,266	0.79	0	0.00	21,623	22.94
112	77,172	0.65	0	0.00	44,547	57.72
113	556,370	4.68	0	0.00	108,104	19.43
121	628,939	5.29	53,493	8.51	369,994	58.83
122	3,008,714	25.33	352,735	11.72	1,256,422	41.76
500	250,726	2.11	3,057	1.22	57,076	22.76
510	1,128,399	9.50	0	0.00	47,117	4.18
900	6,138,533	51.67	53,301	0.87	283,843	4.62
County Total	12,808,711	100.00	478,532	3.74	2,220,997	17.34
Panama, Republic of						
10	93,923	1.27	4,513	4.81	5,220	5.56
111	180,080	2.44	1,597	0.89	12,294	6.83
121	21,903	0.30	20,297	92.67	20,297	92.67

Annex 20
NATIONAL PROTECTION OF MOIST FORESTS IN CENTRAL AMERICA AND THE CARIBBEAN

	Forest Area (FA) (ha)	FA % country area	PAs I–III (ha)	PAs I–III % FA in country	PAs I–VIII (ha)	PAs I–VIII % FA in country
122	3,550,186	48.13	781,125	22.00	1,141,845	32.16
123	172,320	2.34	81,997	47.58	97,007	56.29
900	3,501,111	47.47	78,117	2.23	218,839	6.25
County Total	7,519,523	100.00	967,646	12.87	1,495,672	19.89
Trinidad and Tobago, Republic of						
10	1,576	1.01	0	0.00	0	0.00
111	4,675	2.99	0	0.00	0	0.00
113	4,917	3.14	0	0.00	0	0.00
121	740	0.47	0	0.00	0	0.00
122	109,799	70.13	0	0.00	0	0.00
123	24,350	15.55	0	0.00	0	0.00
130	19,253	12.30	0	0.00	0	0.00
131	102	0.07	0	0.00	0	0.00
500	3,537	2.26	0	0.00	0	0.00
900	308,901	197.31	0	0.00	0	0.00
County Total	477,850	100.00	487	0.10	541	0.11

Annex 21

ODA FOR BIODIVERSITY CONSERVATION PROJECTS CONCERNED WITH PROTECTED AREAS AND ONGOING IN 1992. ONLY COUNTRIES PRIORITISED FOR AID BY THE BRITISH GOVERNMENT UNDER ITS RENEWABLE NATURAL RESOURCES STRATEGIES ARE LISTED.

Country Project title	Donor	Project start year/ end year	Total commitment (US$)	Allocated in 1992 (US$)	Type of commitment
Bangladash					
Integrated Resource Development of the Sunderbans	United Nations Development Programme	1990/1995	3,286,000	547,667	Grant
Country total:			3,286,000	547,667	
Bolivia					
Biodiversity	Federal Department for Foreign Affairs	1992/1995	4,643,000	1,160,750	Grant
Conservation of Biodiversity (Phase 1)	Global Environment Facility via The World Bank	1992/1998	4,500,000	459,184	Unknown
Conservation of Biodiversity (Phase 1)	Swiss Development Cooperation	1992/1998	4,642,857	473,761	Unknown
Country total:			13,785,857	2,093,695	
Botswana					
Initial Measures for the Conservation of the Kalahari Ecosystem	European Commission	1986/1992	1,947,000	278,143	Grant
Technical Assistance to Wildlife and National Parks	European Commission	1988/1992	261,000	52,200	Grant
Wildlife Conservation in Northern Botswana	European Commission – DG VIII (European Development Fund)	1991/1993	8,400,247	2,948,176	Unknown
Country total:			10,608,247	3,278,519	
Brazil					
Lake Mamirula Ecological Reserve project	Overseas Development Administration (UK)	1992/1996	2,900,714	464,114	Unknown
Central Amazonian Flora and Vegetation Project	Overseas Development Administration (UK)	1992/1994	1,022,857	340,952	Unknown
Management Plan for Estacao Ecologica Do Lago	World Wildlife Fund for Nature	1991/1995	0	0	Matching Grant
Management Plan for Estacao Ecologica Do Lago	Overseas Development Administration (UK)	1991/1995	420,183	85,093	Matching Grant
Caxiuana Research Station Project	Overseas Development Administration (UK)	1990/1993	2,320,000	580,000	Grant
Protection of Forest Protected Zones		1992/1994	0	0	Loan Concessional
Protection of Forest Protected Zones	German Overseas Development Fund – Credit Institute for Development	1992/1994	19,230,769	6,410,256	Grant
Protection of Forest Protected Zones	German Agency for Technical Cooperation	1992/1994	3,397,436	1,132,479	Grant
Country total:			29,291,959	9,012,894	
Cameroon					
Environmental Education Programme (199)	Overseas Development Administration (UK)	1992/1995	460,714	115,179	Matching Grant
Environmental Education Programme (199)	Living Earth	1992/1995	0	0	Matching Grant

Annex 21

ODA FOR BIODIVERSITY CONSERVATION PROJECTS CONCERNED WITH PROTECTED AREAS AND ONGOING IN 1992. ONLY COUNTRIES PRIORITISED FOR AID BY THE BRITISH GOVERNMENT UNDER ITS RENEWABLE NATURAL RESOURCES STRATEGIES ARE LISTED.

Country Project title	Donor	Project start year/ end year	Total commitment (US$)	Allocated in 1992 (US$)	Type of commitment
Support for Korup National Park	German Agency for Technical Cooperation	1990/1993	1,140,000	285,000	Grant
Management of Dja Reserve	Directorate General for International Cooperation	1992/1993	52,571	26,286	Unknown
Country total:			1,653,285	426,465	
Gambia					
Kiang West National Park Management and Rural Development Planning Project	United States Agency for International Development	1991/1993	250,000	83,333	Grant
Country total:			250,000	83,333	
Ghana					
Natural Resource Conservation / Historic Preservation	United States Agency for International Development	1991/1995	8,910,000	1,782,000	Unknown
Country total:			8,910,000	1,782,000	
Indonesia					
Conservation and Management in National Parks	World Wildlife Fund for Nature	1980/1994	65,000	4,333	Grant
Sungai Kayan Mentarang Conservation Area	World Wildlife Fund for Nature	1990/1994	7,000	1,400	Grant
National Parks Cooperation	New Zealand Ministry of Agriculture and Fisheries Tech Organic Production Information Library	1991/1993	1,800,000	600,000	Grant
Wasur National Park	Directorate General for International Cooperation	1990/1994	697,244	143,029	Unknown
Tropical Rain Forest Research (Phase 2)	Japan International Cooperation Agency	1985/1994	0	0	Unknown
Biodiversity Conservation Project	Asian Development Bank	1992/1992	24,500,000	24,500,000	Loan Concessional
Country total:			27,069,244	25,248,762	
Kenya					
Indigenous Forest Conservation Project	Overseas Development Administration (UK)	1991/1994	8,544	2,161	Unknown
Mau Forest Protection: Support for Forestry Department Projects	Overseas Development Administration (UK)	1990/1993	383	97	Unknown
Widlife and Protected Areas	International Development Association	1991/1997	60,500,000	7,408,163	Loan Concessional
Park Rehabilitation and Management	United States Agency for International Development	1990/1992	1,300,000	433,333	Grant
GEO Information systems for management	U.N Educational Scientific	1990/1993	386,000	96,500	Grant

Annex 21

ODA FOR BIODIVERSITY CONSERVATION PROJECTS CONCERNED WITH PROTECTED AREAS AND ONGOING IN 1992. ONLY COUNTRIES PRIORITISED FOR AID BY THE BRITISH GOVERNMENT UNDER ITS RENEWABLE NATURAL RESOURCES STRATEGIES ARE LISTED.

Country Project title	Donor	Project start year/ end year	Total commitment (US$)	Allocated in 1992 (US$)	Type of commitment
of Biosphere Reserves	Cultural Organization				
Projet de Protection de la Nature dans la Zone de Mara	European Commission – DG VIII (European Development Fund)	1990/1993	1,701,323	435,564	Unknown
Conservation of Biodiverse Resource Areas	United States Agency for International Development	1992/1996	7,000,000	1,400,000	Unknown
Country total:			70,896,250	9,775,818	
Malawi					
Upgrading of Liwonde National Park	Donor Unknown	1989/1993	1,310,000	262,000	Grant
Country total:			1,310,000	262,000	
Mexico					
Protected Areas Program	Global Environment Facility via The World Bank	1992/1997	25,000,000	3,472,222	Unknown
Management of the Calakmu Biosphere Reserve	United States Agency for International Development	1990/1992	290,000	96,667	Grant
Biological Station of Chajul in Montes Azules Biosphere Reserve	United States Agency for International Development	1990/1992	181,000	60,333	Grant
Administration Project in the Ecological Reserve of Manatlan	Overseas Development Administration (UK)	1992/1992	4,000	4,000	Grant
Country total:			25,475,000	3,633,222	
Namibia					
Support Etosha Ecological Research Institute	Donor Unknown	1992/1993	120,000	60,000	Grant
Country total:			120,000	60,000	
Nepal					
Makalu–Barun Sagarmatha National Park Extension (Phase II)	United States Agency for International Development	1991/1995	698,000	139,600	Grant
Country total:			698,000	139,600	
Nigeria					
Boshi Okwango Management Plan	Overseas Development Administration (UK)	1989/1994	246,873	43,827	Matching Grant
Boshi Okwango Management Plan	World Wildlife Fund for Nature	1989/1994	0	0	Matching Grant
Desertification Control Programme	European Commission	1990/1994	0	0	Loan Concessional
Country total:			246,873	43,827	

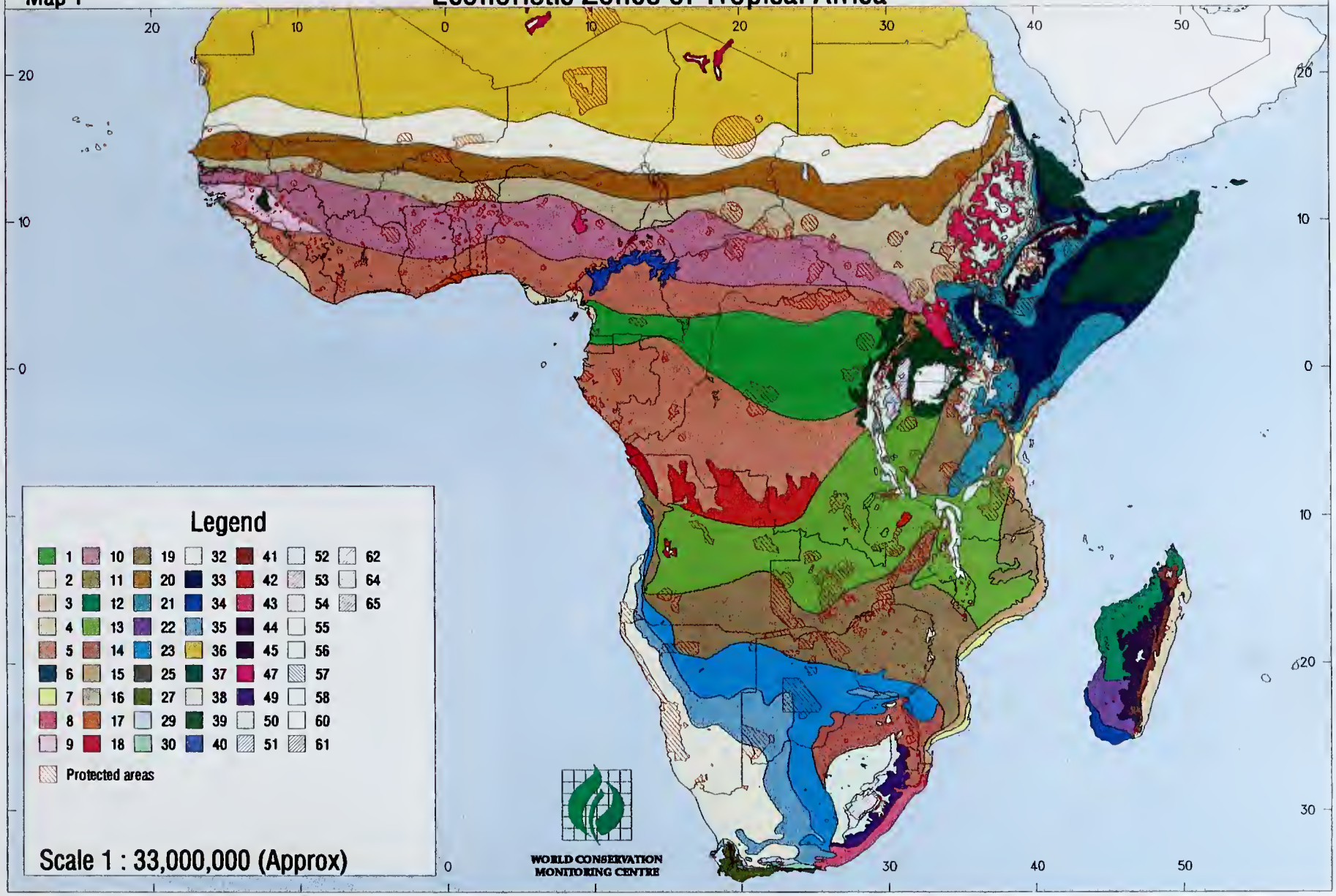
Annex 21

ODA FOR BIODIVERSITY CONSERVATION PROJECTS CONCERNED WITH PROTECTED AREAS AND ONGOING IN 1992. ONLY COUNTRIES PRIORITISED FOR AID BY THE BRITISH GOVERNMENT UNDER ITS RENEWABLE NATURAL RESOURCES STRATEGIES ARE LISTED.

Country Project title	Donor	Project start year/ end year	Total commitment (US$)	Allocated in 1992 (US$)	Type of commitment
Pakistan					
Himalayan Jungle (664)	International Council for Bird Preservation (BirdLife International)	1992/1994	0	0	Matching Grant
Himalayan Jungle (664)	Overseas Development Administration (UK)	1992/1994	135,366	45,122	Matching Grant
Country total:			135,366	45,122	
Sri Lanka					
Wildlife Conservation and Protected Areas Management	Global Environment Facility via UNDP	1992/1997	4,100,000	569,444	Unknown
Country total:			4,100,000	569,444	
Zimbabwe					
Technical Assistance to the National Parks	European Commission	1988/1992	566,000	113,200	Grant
Country total:			566,000	113,200	
Total for priority countries:			198,402,081	57,115,568	

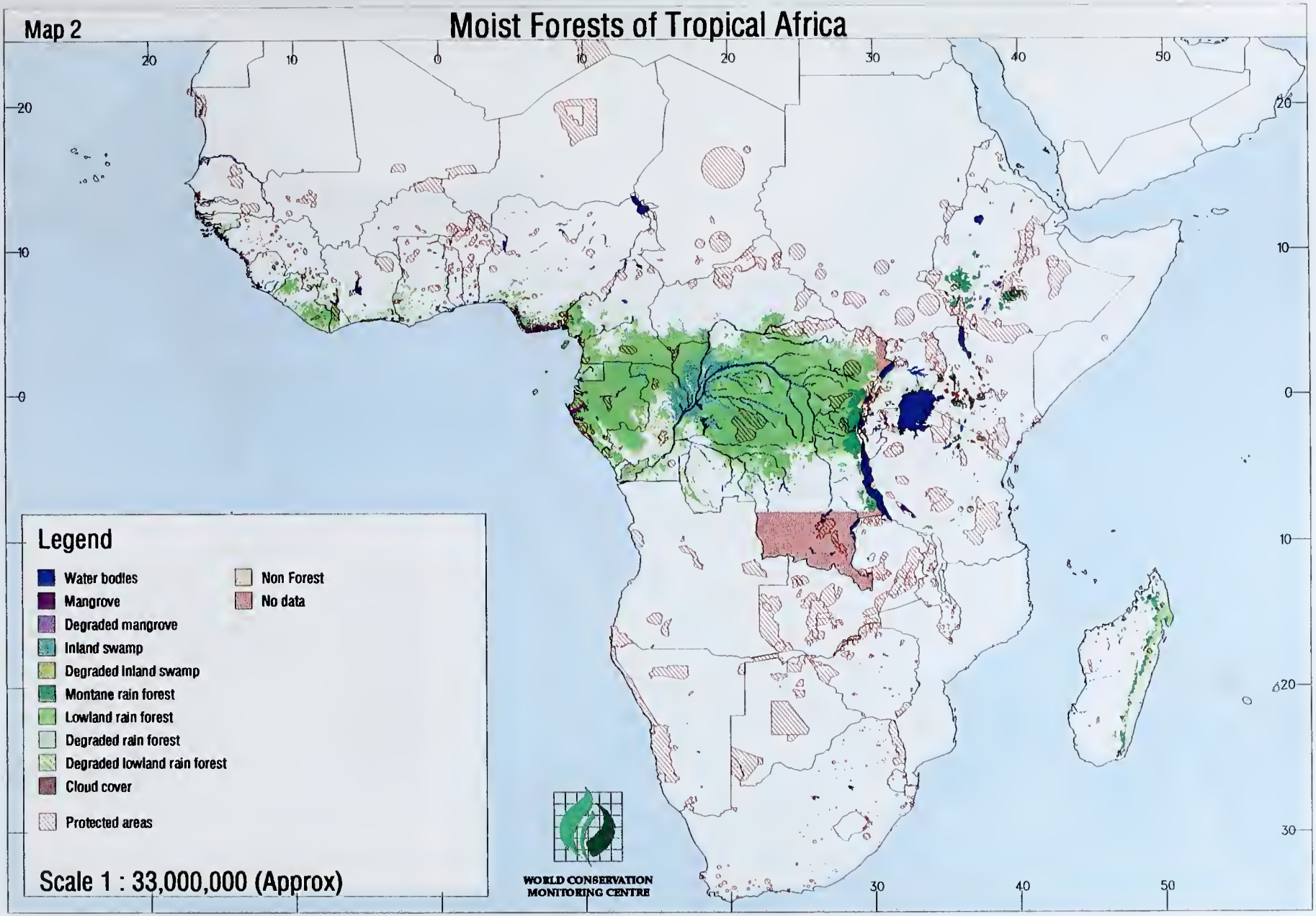
Map 1

Ecofloristic Zones of Tropical Africa



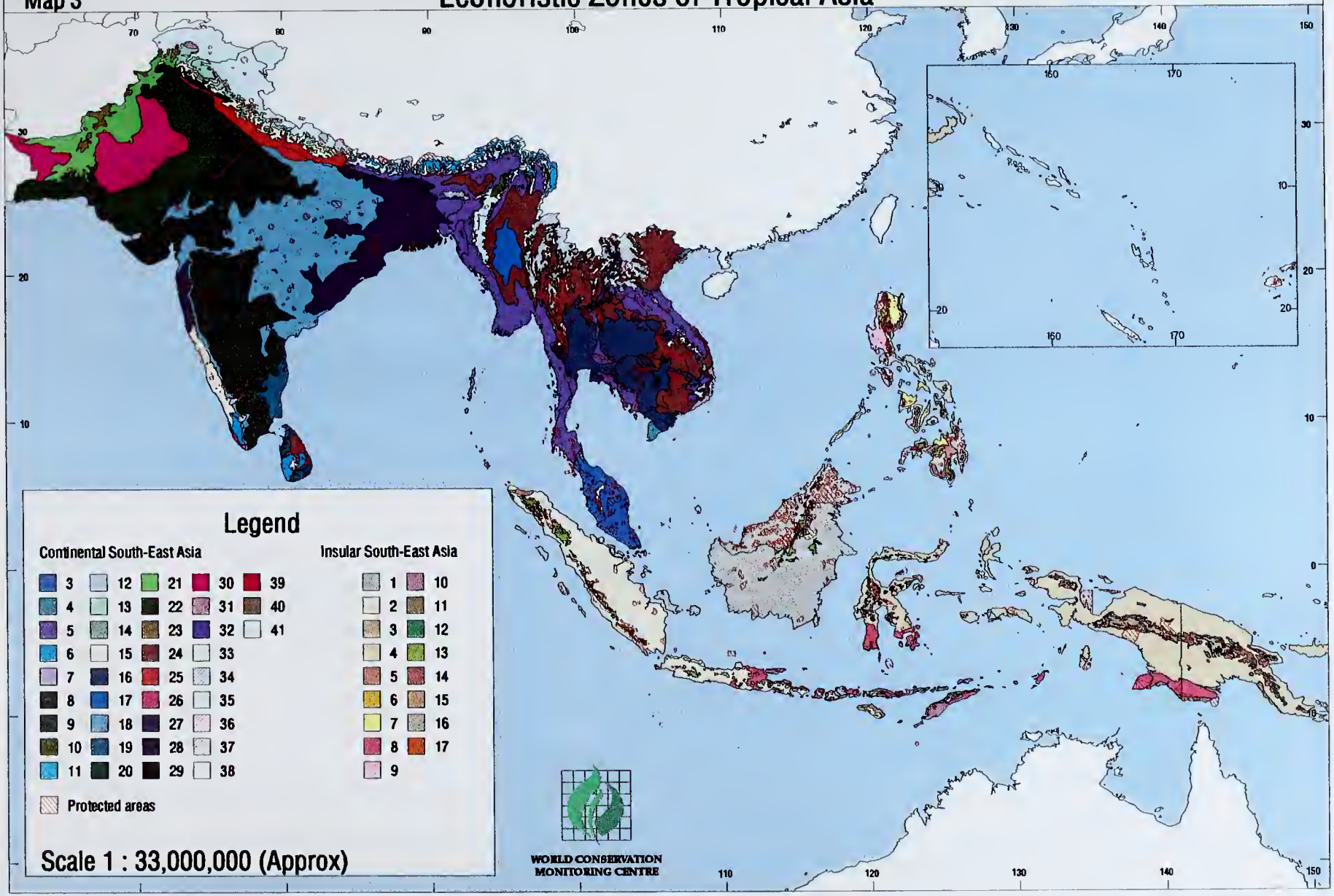
Map 2

Moist Forests of Tropical Africa



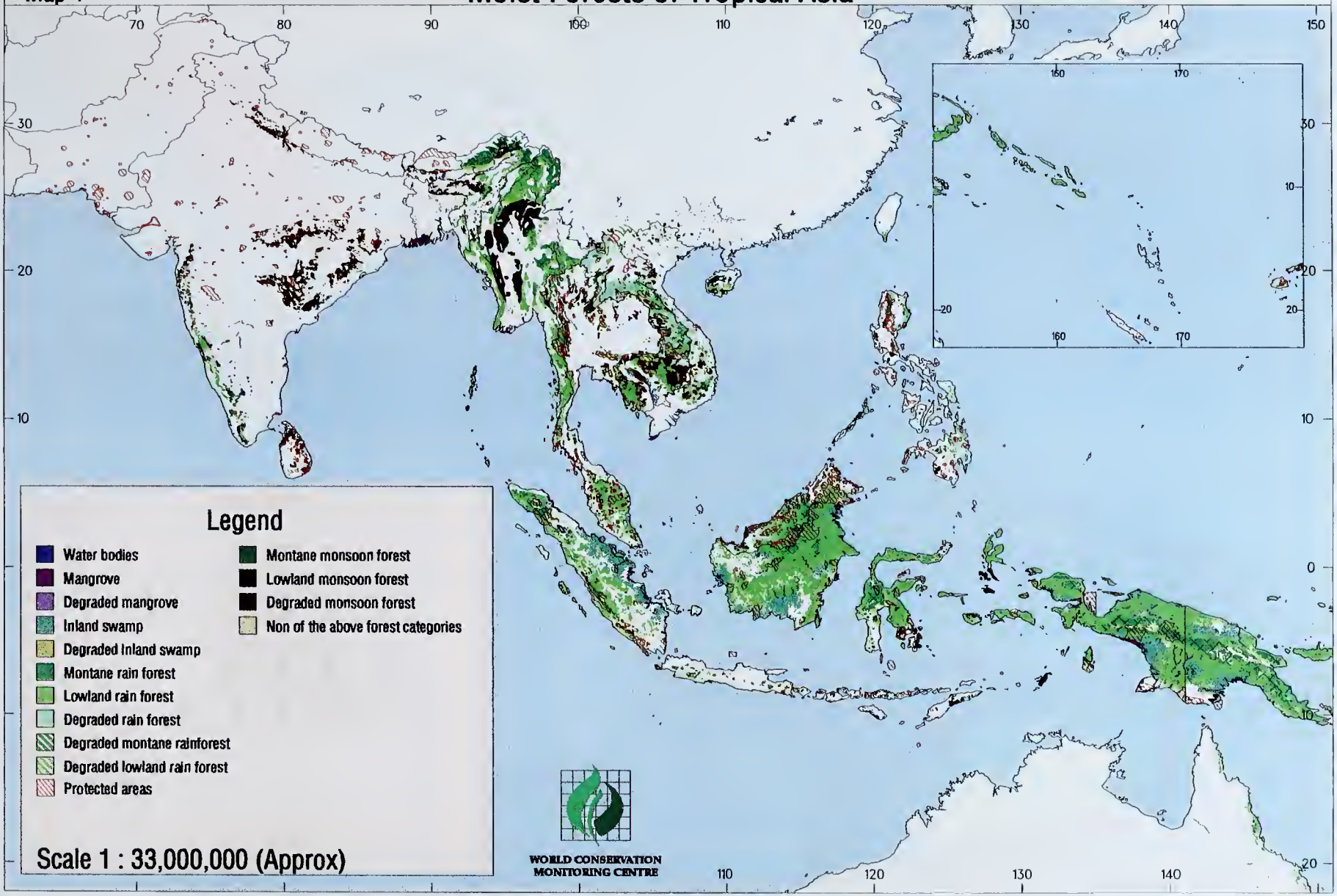
Map 3

Ecofloristic Zones of Tropical Asia



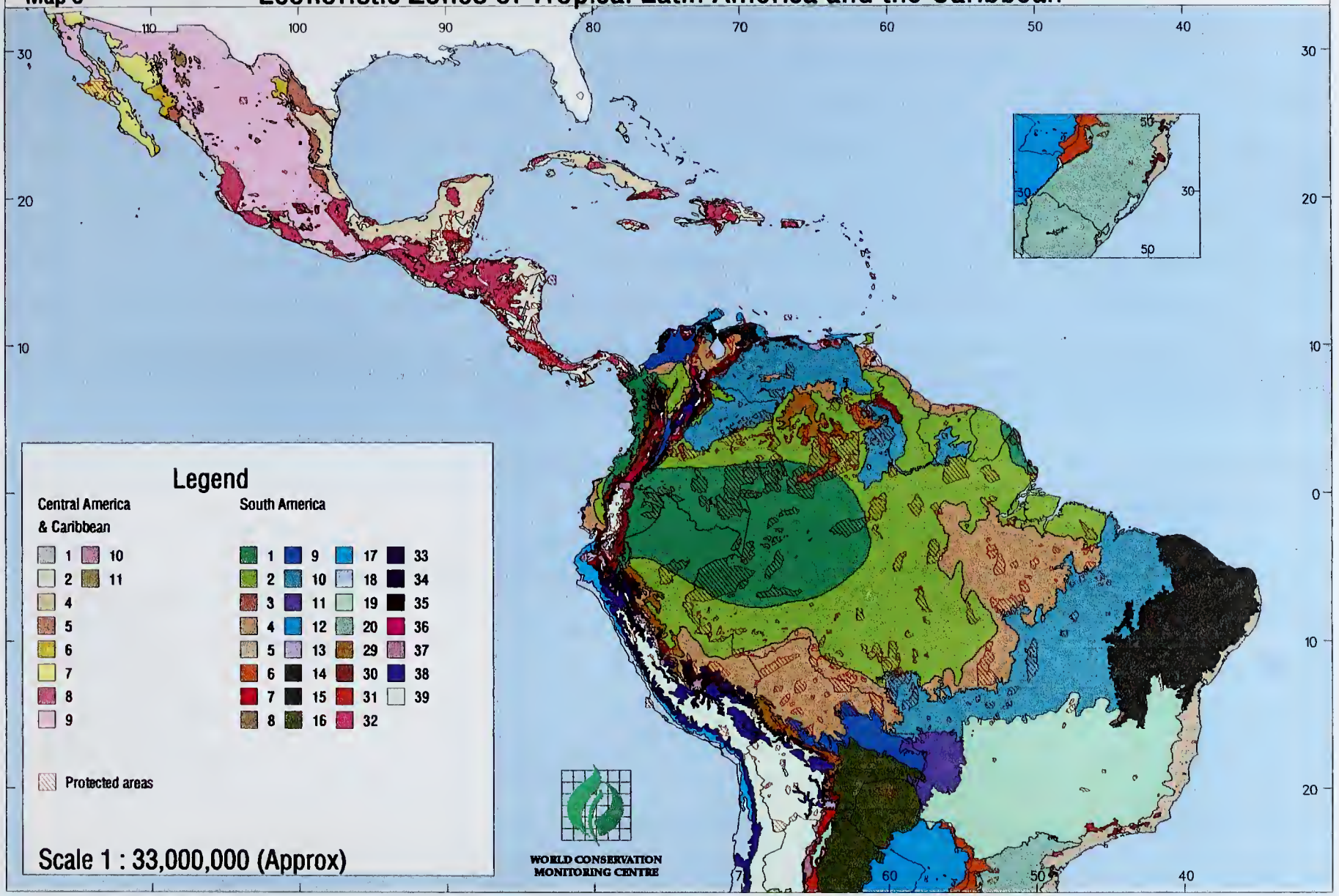
Map 4

Moist Forests of Tropical Asia



Map 5

Ecofloristic Zones of Tropical Latin America and the Caribbean



Map 6

Moist Forests of Tropical Latin America and the Caribbean

Biodiversity Conservation in the Tropics: gaps in habitat protection and funding priorities

This study makes use of extensive spatial datasets, not previously available, to provide for the first time a comprehensive assessment of the conservation status of biodiversity in the terrestrial tropics. The extent to which potential habitats and closed moist forests are represented in protected areas is assessed. Priorities for conservation action are identified on the basis of a country's relative importance for a given habitat and the extent to which it is protected. National importance for biodiversity is also examined in relation to national and foreign investments in protected areas.

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